

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 10-2-18  
 Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/796,083  
 Mail Box and Bldg/Room Location: CD66 Results Format Preferred (circle): PAPER DISK E-MAIL  
 (Rem.)

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

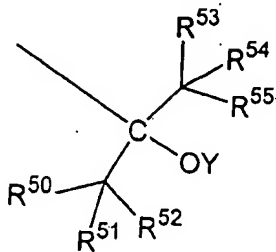
Title of Invention: P12. See Bib

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

if too many hits, then the polymer also has to contain  
 one of the repeating units (II)-(V) shown in C  
 Please search for a polymer or resin → This poly  
 which ~~contains~~ contains at least ~~one~~  
 (in its structure) used together  
 with a  
 two groups represented by the formula (Z)



(Z)

SCIENTIFIC REFERENCE BARRADIATION)

Sci. &amp; Tech. Inf. Ctr.

PAT. REG.

Pat. Reg.

Photoacid gen  
 (compound that  
 generates an  
 acid up  
 in a  
 positive  
 re  
 for  
 Phot  
 compos

in general formula (Z),

R<sup>50</sup> to R<sup>55</sup> each independently represent ~~represents~~ a hydrogen atom, a fluorine atom, or

an alkyl group, provided that at least one of R<sup>50</sup> to R<sup>55</sup> is either a fluorine atom or an alkyl group

in which at least one of the hydrogen atoms has been replaced by a fluorine atom, and Y is H ~~atom or an~~ organic

## STAFF USE ONLY

Searcher: 10/25/05

Searcher Phone #: 10/26/05

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Searcher Prep & Review Time: 60

Clerical Prep Time: 36

Online Time: 100

## Type of Search

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) 1

Bibliographic \_\_\_\_\_

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

## Vendors and cost where applicable

STN 635-78

Dialog \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

Dr.Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_

**AMENDMENTS TO THE CLAIMS**

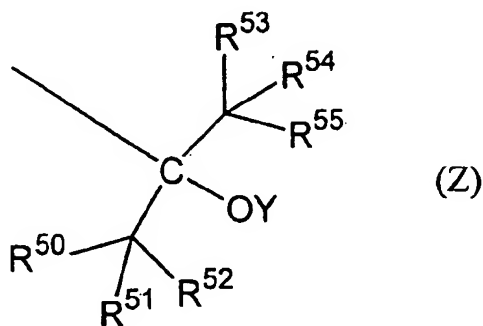
This listing of claims will replace all prior versions and listings of claims in the application:

**LISTING OF CLAIMS:**

1. (currently amended): A positive resist composition comprising:

(A) a resin which comprises a repeating unit having at least two groups represented by the following general formula (Z) and at least one ~~kind of repeating units~~ unit selected from the group consisting of repeating units represented by the following general formulae (II) to ~~(VI)~~ (V), the resin increasing the solubility in an alkaline developing solution by the action of an acid; and

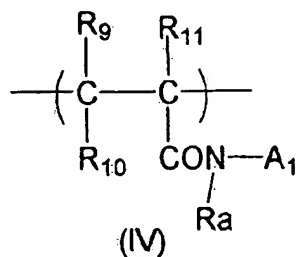
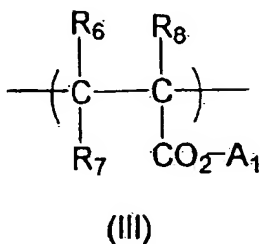
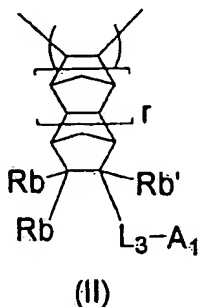
(B) at least one compound which generates an acid by the action of actinic rays or a radiation:



in general formula (Z),

$R^{50}$  to  $R^{55}$  each independently ~~represent~~ represents a hydrogen atom, a fluorine atom, or an alkyl group, provided that at least one of  $R^{50}$  to  $R^{55}$  is either a fluorine atom or an alkyl group in which at least one of the hydrogen atoms has been replaced by a fluorine atom, and

Y's each independently represent a hydrogen atom or an organic group;



in general formula (II),

Rb and Rb' each independently ~~represent~~ represents a hydrogen atom, a halogen atom, or an organic group,

L<sub>3</sub> represents a single bond or a bivalent connecting group, A<sub>1</sub> represents a partial structure represented by the following general formula (A<sub>1</sub>), and

r represents 0 or 1;

in general formula (III),

R<sub>6</sub> to R<sub>8</sub> each independently ~~represent~~ represents a hydrogen atom, a fluorine atom, a chlorine atom, a cyano group, or an alkyl group in which at least one of the hydrogen atoms has been replaced by a fluorine atom, provided that at least one of R<sub>6</sub> to R<sub>8</sub> is not a hydrogen atom, and

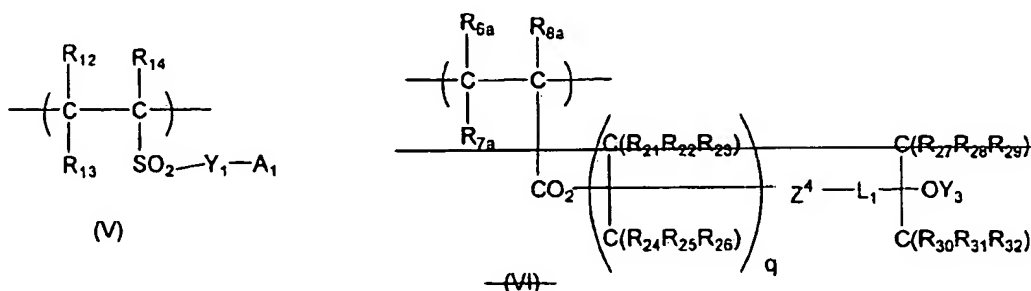
A<sub>1</sub> represents a partial structure represented by the following general formula (A<sub>1</sub>);

in general formula (IV),

R<sub>9</sub> to R<sub>11</sub> each independently ~~represent~~ represents a hydrogen atom, a fluorine atom, a chlorine atom, a cyano group, or an alkyl group in which at least one of the hydrogen atoms has been replaced by a fluorine atom, provided that at least one of R<sub>9</sub> to R<sub>11</sub> is not a hydrogen atom,

R<sub>a</sub> represents a hydrogen atom, an alkyl group, a cycloalkyl group, an aryl group, or an aralkyl group, and

A<sub>1</sub> represents a partial structure represented by the following general formula (A<sub>1</sub>);



in general formula (V),

R<sub>12</sub> to R<sub>14</sub> each independently ~~represent~~ represents a hydrogen atom, a fluorine atom, a chlorine atom, a cyano group, or an alkyl group in which at least one of the hydrogen atoms has been replaced by a fluorine atom,

Y<sub>1</sub> represents a single bond, -O-, or -N(R<sub>a</sub>)-, wherein R<sub>a</sub> represents a hydrogen atom, an alkyl group, a cycloalkyl group, an aryl group, or an aralkyl group, and

A<sub>1</sub> represents a partial structure represented by the following general formula (A<sub>1</sub>);

~~in general formula (VI);~~

~~R<sub>6a</sub> to R<sub>8a</sub> each independently represent a hydrogen atom, a fluorine atom, a chlorine atom, a cyano group, or an alkyl group in which at least one of the hydrogen atoms has been replaced by a fluorine atom, provided that at least one of R<sub>6a</sub> to R<sub>8a</sub> is not a hydrogen atom;~~

~~R<sub>21</sub> to R<sub>26</sub> each independently represent a hydrogen atom, a fluorine atom, or an alkyl group, provided that at least one of R<sub>21</sub> to R<sub>26</sub> is a fluorine atom;~~



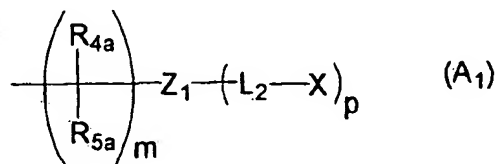
~~R<sub>27</sub> to R<sub>32</sub> each independently represent a hydrogen atom, a fluorine atom, or an alkyl group, provided that at least one of R<sub>27</sub> to R<sub>32</sub> is a fluorine atom,~~

~~Z<sub>4</sub> represents a phenylene group, a cyclohexylene group, an adamantane residue, or a norbornane residue,~~

~~Y<sub>3</sub> represents a hydrogen atom or an organic group,~~

~~L<sub>1</sub> represents a single bond or a bivalent connecting group, and~~

~~q represents 0 or 1; and~~



in general formula (A<sub>1</sub>),

~~R<sub>4a</sub> and R<sub>5a</sub> each independently represent~~ represents an alkyl group,

Z<sub>1</sub> represents an alicyclic hydrocarbon group having a valence of p+1,

L<sub>2</sub> represents a single bond or a ~~bivalent connecting~~ methylene group,

X represents a hydroxy group, a cyano group, an alkoxy group, or an alkyl group,

provided that at least one of the X's is not an alkyl group,

when two or more L<sub>2</sub>'s and two or more X's are present in the partial structure, the L<sub>2</sub>'s and the X's each may be the same or different,

m represents 0 or 1, and

p represents an integer of 1 to 4.

=> fil reg  
FILE 'REGISTRY' ENTERED AT 16:37:49 ON 25 OCT 2005

=> d his

FILE 'HCAPLUS' ENTERED AT 14:57:10 ON 25 OCT 2005  
E JP2003-067010/PRN,AP  
L1 1 S E3  
SEL RN

FILE 'REGISTRY' ENTERED AT 14:58:16 ON 25 OCT 2005  
L2 28 S E1-E28

FILE 'LREGISTRY' ENTERED AT 15:09:44 ON 25 OCT 2005  
L3 STR  
L4 STR L3  
L5 12 S L4

FILE 'REGISTRY' ENTERED AT 15:13:34 ON 25 OCT 2005  
L6 SCR 2043  
L7 50 S L4 AND L6  
L8 4923 S L4 AND L6 FUL  
L9 13 S L2 AND L8  
L10 SCR 1968  
SAV L8 LEE083/A  
L11 2429 S L8 AND 1-20/F

FILE 'HCAPLUS' ENTERED AT 15:28:11 ON 25 OCT 2005  
L12 1155 S L11  
L13 354 S L12 (L) ?RESIST?  
L14 220 S L13 AND PHOTO?/SC  
L15 15 S L12 (L) PHOTOACID?  
L16 51 S L12 (L) POS? (A) ?RESIST?  
L17 1 S L16 AND L1  
L18 65 S L16 OR L15  
SEL L18 HIT RN 1-

=> d que l18

L4 STR

4	8
O	O
C—C—C	C—C—C
1 2 3	5 6 7

#### NODE ATTRIBUTES:

CONNECT IS E4 RC AT 2  
CONNECT IS E4 RC AT 6  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

#### GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L6 SCR 2043  
 L8 4923 SEA FILE=REGISTRY SSS FUL L4 AND L6  
 L11 2429 SEA FILE=REGISTRY ABB=ON PLU=ON L8 AND 1-20/F  
 L12 1155 SEA FILE=HCAPLUS ABB=ON PLU=ON L11  
 L15 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 (L) PHOTOACID?  
 L16 51 SEA FILE=HCAPLUS ABB=ON PLU=ON L12 (L) POS? (A) ?RESIST?  
 L18 65 SEA FILE=HCAPLUS ABB=ON PLU=ON L16 OR L15

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 16:38:11 ON 25 OCT 2005

=> d l18 1-65 ibib abs hitstr hitind

L18 ANSWER 1 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:1005004 HCAPLUS  
 DOCUMENT NUMBER: 143:315453  
 TITLE: Positive resist composition for immersion  
 exposure and method for forming resist pattern  
 INVENTOR(S): Ishiduka, Keita; Endo, Kotaro  
 PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 55 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005085954	A1	20050915	WO 2005-JP3903	2005 0307

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,  
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE,  
 KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
 MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT,  
 RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
 ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH,  
 CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT,  
 LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

JP 2005284238 A2 20051013 JP 2004-170424

2004  
0608

PRIORITY APPLN. INFO.:

JP 2004-63016

A

2004  
0305

JP 2004-170424

A

2004  
0608

AB Discloses are a pos. resist composition for immersion exposure and a method for forming a resist pattern. Specifically disclosed are a pos. resist composition for immersion exposure with immersion resistance which is excellent in water blocking properties, and a method for forming a resist pattern using such a resist composition. The pos. resist composition for immersion exposure contains a resin component (A) whose alkali solubility is increased by the action of an acid and an acid generator component (B) which generates an acid through exposure, and is characterized in that the resin component (A) includes at least an acrylate constitutional unit (a1) and a (meth)acrylate constitutional unit (a2) having an acid-cleavable dissoln. inhibiting group and the constitutional unit (a1) is composed of a cyclic group bonded to the acrylate of the constitutional unit (a1) and a fluorinated organic group having a specific structure which is bonded to the cyclic group.

IT 864739-12-8

(pos. resist composition for immersion exposure  
and method for forming resist pattern)

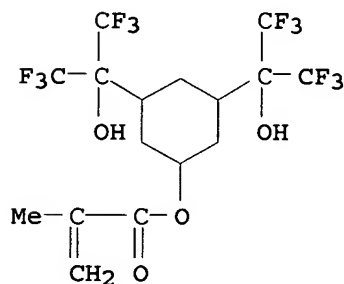
RN 864739-12-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3,5-bis[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-methyl-2-propenoate and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 781637-36-3

CMF C16 H16 F12 O4

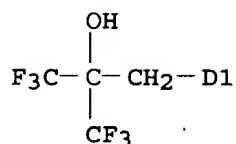
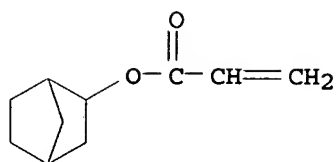


CM 2

CRN 688745-05-3

CMF C14 H16 F6 O3

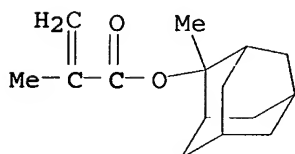
CCI IDS



CM 3

CRN 177080-67-0

CMF C15 H22 O2



IC ICM G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 791807-94-8 864739-11-7 864739-12-8

(pos. resist composition for immersion exposure and method for forming resist pattern)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:975951 HCAPLUS

DOCUMENT NUMBER: 143:275617

TITLE: Excimer laser-sensitive polymers, their chemically amplified positive photoresists, and photolithography using them with suppressed edge roughness

INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Kawai, Yoshio; Sasago, Masaru; Endo, Masataka; Kishimura, Shinji; Maeda, Kazuhiko; Komoritani, Haruhiko; Yamanaka, Kazuhiro

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan; Matsushita Electric Industrial Co., Ltd.; Central Glass Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.

CODEN: JKXXAF

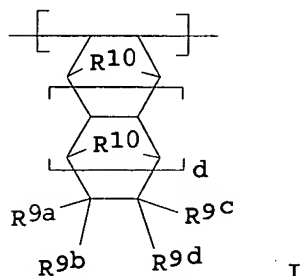
DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005240024	A2	<u>20050908</u>	JP 2005-15496	2005 0124
US 2005221221	A1	20051006	US 2005-51721	2005 0127
			JP 2004-23724	2004 0130

PRIORITY APPLN. INFO.:

GI



AB The invention relates to polymers having repeating units CR1R2CR3CO2R4 [R1, R2 = H, F; R3 = H, (F-containing) linear, branched, or cyclic C1-10 alkyl, R4 = acid-dissociable group], CR5R6CR7CO2R8 (R5, R6 = same as R1, R2; R7 = same as R3; R8 = adhesive group), and I (R9a, R9b, R9c, R9d = H, linear, branched, or cyclic C1-20 alkyl containing adhesive groups selected from OH, ether, carbonyl, acetyl, etc., may form ring; R9a = R9b = R9c = R9d ≠ H; R10 = CH2, C2H4, O, S; d = 0, 1). The photoresists are particularly sensitive to ArF excimer laser beams.

IT 863924-05-4P 863924-06-5P

(ArF excimer laser-sensitive chemical amplified pos. photoresists for patterns with suppressed edge roughness)

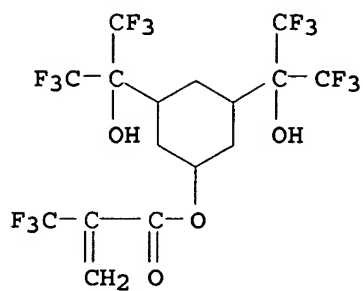
RN 863924-05-4 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with 3,5-bis[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl 2-(trifluoromethyl)-2-propenoate, 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-(trifluoromethyl)-2-propenoate, 1-methylcyclopentyl 2-(trifluoromethyl)-2-propenoate and spiro[bicyclo[2.2.1]hept-5-ene-2,3'-(2'H)-furan]-5'-(4'H)-one (9CI) (CA INDEX NAME)

CM 1

CRN 585569-92-2

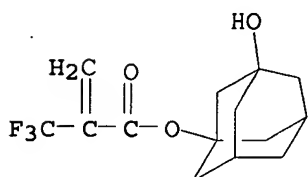
CMF C16 H13 F15 O4



CM 2

CRN 521913-15-5

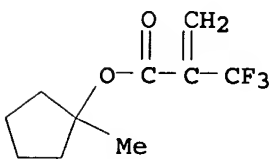
CMF C14 H17 F3 O3



CM 3

CRN 478623-09-5

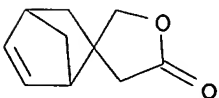
CMF C10 H13 F3 O2



CM 4

CRN 282542-79-4

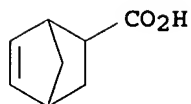
CMF C10 H12 O2



CM 5

CRN 120-74-1

CMF C8 H10 O2



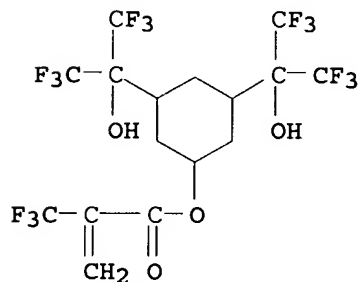
RN 863924-06-5 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-acetic acid, polymer with  
 3,5-bis[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohe-  
 xyl 2-(trifluoromethyl)-2-propenoate, 3-  
 hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-(trifluoromethyl)-2-  
 propenoate, 1-methylcyclopentyl 2-(trifluoromethyl)-2-propenoate  
 and spiro[bicyclo[2.2.1]hept-5-ene-2,3'-(2'H)-furan]-5'-(4'H)-one  
 (9CI) (CA INDEX NAME)

CM 1

CRN 585569-92-2

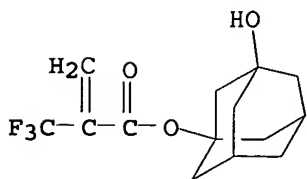
CMF C16 H13 F15 O4



CM 2

CRN 521913-15-5

CMF C14 H17 F3 O3

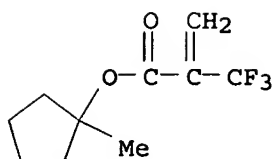


CM 3

CRN 478623-09-5

CMF C10 H13 F3 O2





CM 4

CRN 282542-79-4

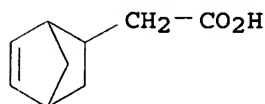
CMF C10 H12 O2



CM 5

CRN 825-71-8

CMF C9 H12 O2



IC ICM C08F220-10  
 ICS C08F212-14; C08F224-00; C08F232-08; C08F234-00; G03F007-004;  
 G03F007-038; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38

IT 863923-95-9P 863923-96-0P 863923-97-1P 863923-99-3P  
 863924-00-9P 863924-01-0P 863924-02-1P 863924-04-3P  
 863924-05-4P 863924-06-5P  
 (ArF excimer laser-sensitive chemical amplified **pos.**  
**photoresists** for patterns with suppressed edge  
 roughness)

L18 ANSWER 3 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:902343 HCAPLUS

DOCUMENT NUMBER: 143:238687

TITLE: Photosensitive compositions with high  
 sensitivity, resolution, and wide defocus  
 (DOF) latitude, sulfonium salts therefor, and  
 method for patterning therewith

INVENTOR(S): Kodama, Kunihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 83 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005227680	A2	20050825	JP 2004-38307	2004 0216
PRIORITY APPLN. INFO.:			JP 2004-38307	2004 0216

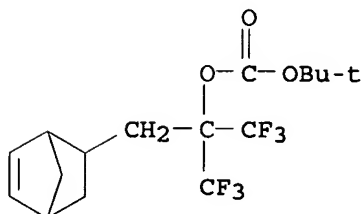
AB The compns. contain (A) sulfonium salts having  
 (ASO<sub>2</sub>Rx)m<sub>1</sub>Y<sub>1</sub>S+[Y<sub>2</sub>(RxSO<sub>2</sub>A)m<sub>2</sub>][Y<sub>3</sub>(RxSO<sub>2</sub>A)m<sub>3</sub>] [Y<sub>1</sub>-Y<sub>3</sub> = organic group; A  
 = (cyclo)alkyl, aryl, aralkyl, camphoryl; Rx = single bond, O,  
 NRY; Ry = H, (cyclo)alkyl; m = 1-3; m<sub>1</sub>, m<sub>2</sub>, m<sub>3</sub> = 0-3; m<sub>1</sub> + m<sub>2</sub> + m<sub>3</sub>  
 = 1-6]. The compns. may contain (B) resins which can be decomposed  
 by acids to increase alkaline solubility or, (D) resins soluble in alkaline  
 developers and (E) agents for curing D by acids. In the process,  
 the compns. are formed into films, which are exposed and developed  
 to give patterns.

IT 370102-83-3 607710-70-3  
 (photolithog. using photosensitive compns. containing  
 sulfonyl-bearing sulfonium compds. as photoacid  
 generators and showing wide defocus latitude)

RN 370102-83-3 HCAPLUS  
 CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-  
 trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester,  
 polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hep  
 t-5-ene-2-ethanol (9CI) (CA INDEX NAME)

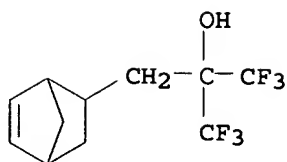
CM 1

CRN 196314-63-3  
 CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1  
 CMF C11 H12 F6 O



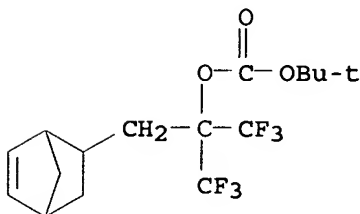
RN 607710-70-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

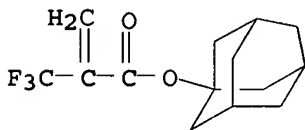
CMF C16 H20 F6 O3



CM 2

CRN 188739-82-4

CMF C14 H17 F3 O2



IC ICM G03F007-004

ICS C07C381-12; G03F007-038; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

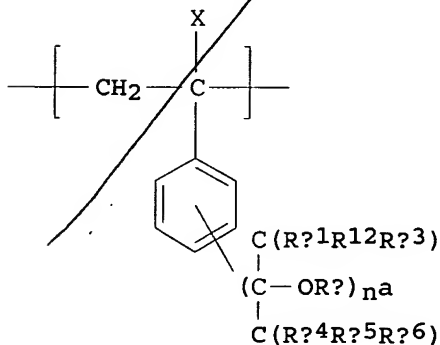
IT	158593-28-3	177034-75-2	196709-91-8	200808-68-0
	250378-10-0	288620-13-3	289623-64-9	312620-54-5
	325143-37-1	325143-38-2	359635-35-1	366808-82-4
	370102-83-3	370866-39-0	372968-15-5	391232-36-3
	398140-43-7	406702-00-9	459418-30-5	482609-97-2
	524699-47-6	607710-65-6	607710-67-8	607710-68-9
	607710-69-0	607710-70-3	610300-92-0	610300-93-1
	610300-94-2	610300-95-3	615278-35-8	677351-20-1
	677351-26-7	848408-51-5	848408-52-6	862261-72-1
	862997-26-0	862997-27-1	862997-31-7	862997-34-0
	862997-41-9	862997-57-7	862997-60-2	

(photolithog. using photosensitive compns. containing sulfonyl-bearing sulfonium compds. as **photoacid** generators and showing wide defocus latitude)

L18 ANSWER 4 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:822722 HCAPLUS  
 DOCUMENT NUMBER: 143:238674  
 TITLE: Positive chemically amplified photoresist composition and method for pattern formation using the same  
 INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 70 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005221960	A2	20050818	JP 2004-32100	2004 0209
PRIORITY APPLN. INFO.:			JP 2004-32100	2004 0209

GI



I

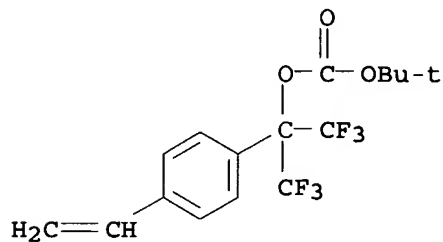
AB The title composition contains an alkali-solubilizable resin containing Fluorine; a photoacid generator, and a solvent, wherein a compound having repeating unit I(Ra1-a6 = H, F, fluoro alkyl; X = H, F, Br, CN, F3C-) is added in the composition. The composition provides resist of high  $\leq 200$  nm light transmission.

IT 143336-94-1P 862670-98-2P 862671-00-9P  
 (pos. photoresist composition and method for pattern formation using the same)

RN 143336-94-1 HCAPLUS  
 CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

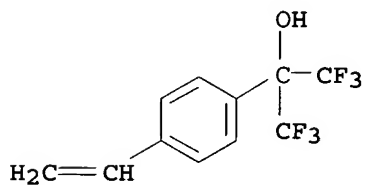
CM 1

CRN 143336-93-0  
 CMF C16 H16 F6 O3



CM 2

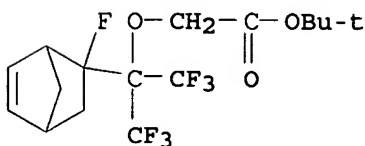
CRN 2386-82-5  
 CMF C11 H8 F6 O



RN 862670-98-2 HCAPLUS  
 CN Acetic acid, [2,2,2-trifluoro-1-(2-fluorobicyclo[2.2.1]hept-5-en-2-yl)-1-(trifluoromethyl)ethoxy]-, 1,1-dimethylethyl ester, polymer with 2-fluoro- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-methanol (9CI) (CA INDEX NAME)

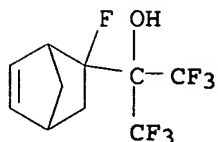
CM 1

CRN 862670-97-1  
 CMF C16 H19 F7 O3



CM 2

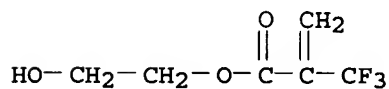
CRN 474516-20-6  
CMF C10 H9 F7 O



RN 862671-00-9 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-hydroxyethyl ester,  
polymer with 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-  
1-(trifluoromethyl)ethyl carbonate and 4-ethenyl- $\alpha,\alpha$ -  
bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

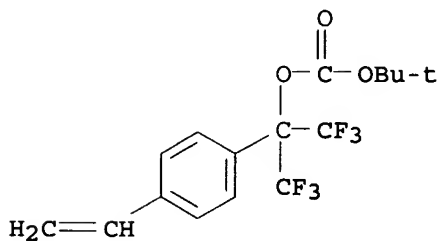
CM 1

CRN 450358-94-8  
CMF C6 H7 F3 O3



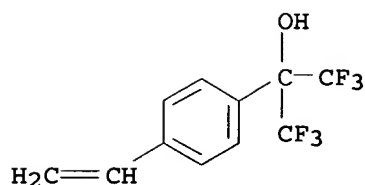
CM 2

CRN 143336-93-0  
CMF C16 H16 F6 O3



CM 3

CRN 2386-82-5  
CMF C11 H8 F6 O



IC ICM G03F007-039  
 ICS C08F012-14; G03F007-033; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 116352-29-5P 143336-94-1P 607710-65-6P 679804-77-4P  
 862670-96-0P 862670-98-2P 862670-99-3P  
 862671-00-9P  
 (pos. photoresist composition and method for  
 pattern formation using the same)

L18 ANSWER 5 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:822672 HCAPLUS

DOCUMENT NUMBER: 143:219455

TITLE: Chemically-amplified far-UV positive  
 photoresists and negative photoresists, and  
 their patterning method

INVENTOR(S): Kodama, Kunihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 80 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

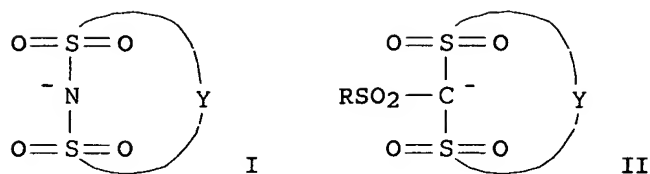
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005221721	A2	20050818	JP 2004-29068	2004 0205
EP 1566692	A1	20050824	EP 2005-2140	2005 0202

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
 MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,  
 EE, HU, PL, SK, BA, HR, IS, YU

PRIORITY APPLN. INFO.: JP 2004-29068 A  
 2004  
 0205

GI



AB Both the photoresists contain sulfonium salts or iodonium salts bearing anions of I and II [Y = fluorine-substituted alkylene, R = (cyclo)alkyl] as photoacid generators. The pos. photoresists contain the photoacid generators and polymers increasing solubility in alkaline developers upon decomposition with acids. The neg. photoresists contain the photoacid generators, polymers soluble in alkaline developers, and crosslinking agents undergoing crosslinking with the polymers upon acid action. The photoresists provide patterns with good edge sharpness.

IT 370102-83-3 607710-70-3

(binder; in chemical-amplified pos. far-UV photoresists containing sulfonium or iodonium salt photoacid generators)

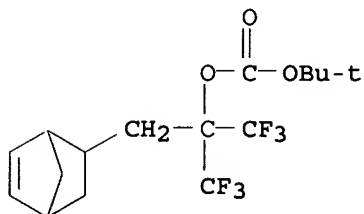
RN 370102-83-3 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

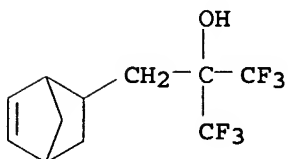
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



RN 607710-70-3 HCAPLUS

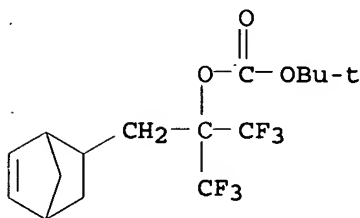


CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

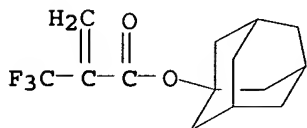
CMF C16 H20 F6 O3



CM 2

CRN 188739-82-4

CMF C14 H17 F3 O2



IC ICM G03F007-004  
ICS G03F007-038; G03F007-039; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

IT	129674-22-2	177034-75-2	200808-68-0	249743-11-1
	250378-10-0	288620-13-3	289623-64-9	312620-54-5
	325143-37-1	325143-38-2	359635-35-1	366808-82-4
	<b>370102-83-3</b>	370866-39-0	372968-15-5	391232-36-3
	398140-43-7	406702-00-9	459418-30-5	482609-97-2
	524699-47-6	607357-61-9	607710-65-6	607710-66-7
	607710-67-8	607710-68-9	607710-69-0	<b>607710-70-3</b>
	610300-92-0	610300-93-1	610300-94-2	610300-95-3
	610300-96-4	610301-49-0	610301-50-3	615278-35-8
	669088-11-3	845795-93-9	848408-51-5	848408-52-6
	862261-72-1	862261-73-2		

(binder; in chemical-amplified pos. far-UV photoresists containing sulfonium or iodonium salt **photoacid** generators)

L18 ANSWER 6 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:811128 HCAPLUS

DOCUMENT NUMBER: 143:219451

TITLE: F2 laser-sensitive positive photoresist compositions with high sensitivity and pattern formation using them

INVENTOR(S): Inabe, Haruki  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 76 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005221552	A2	20050818	JP 2004-26698	2004 0203

PRIORITY APPLN. INFO.: JP 2004-26698  
 2004  
 0203

AB The compns. comprise (A) F-containing polymers increasing their alkali solubility in the presence of acids, (B) photoacid generators, and (C) mixed solvents consisting of  $\geq 2$  solvents, one of which is an alkoxyalc. having a  $C \geq 3$  linking group between the alkoxy and the alc. OH.

IT 819860-42-9 862374-77-4 862374-79-6  
 862374-81-0

(mixed solvents for F2 laser-sensitive pos.  
 photoresists with high sensitivity)

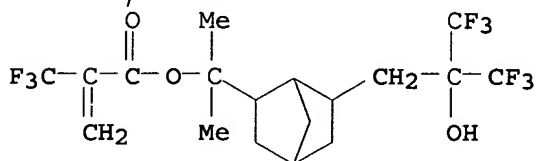
RN 819860-42-9 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-methyl-1-[6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl]ethyl ester, polymer with  $\alpha, \alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 819860-41-8

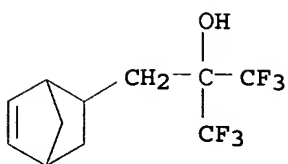
CMF C18 H21 F9 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



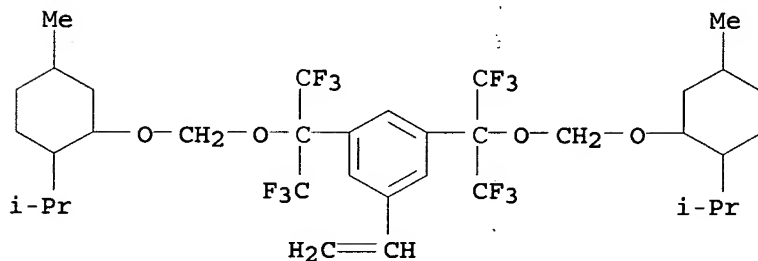
RN 862374-77-4 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-[[[5-methyl-2-(1-methylethyl)cyclohexyl]oxy]methoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 862374-76-3

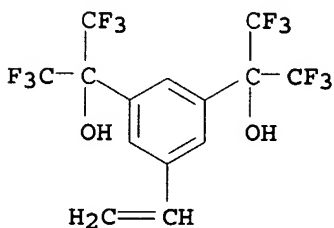
CMF C36 H48 F12 O4



CM 2

CRN 568587-26-8

CMF C14 H8 F12 O2



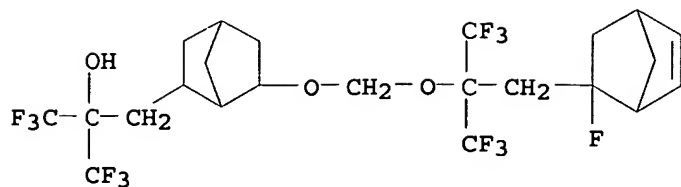
RN 862374-79-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-ethanol, 2-fluoro- $\alpha,\alpha$ -bis(trifluoromethyl)-, polymer with tetrafluoroethene and 6-[[2,2,2-trifluoro-1-[(2-fluorobicyclo[2.2.1]hept-5-en-2-yl)methyl]-1-(trifluoromethyl)ethoxy]methoxy]- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 862374-78-5

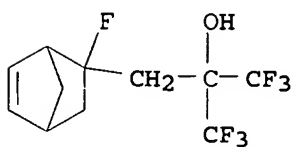
CMF C23 H25 F13 O3



CM 2

CRN 835654-43-8

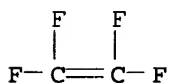
CMF C11 H11 F7 O



CM 3

CRN 116-14-3

CMF C2 F4



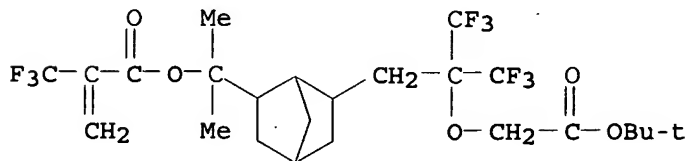
RN 862374-81-0 HCAPLUS

CM 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[6-[2-[2-(1,1-dimethylethoxy)-2-oxoethoxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl]-1-methylethyl ester, polymer with tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

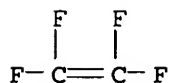
CRN 862374-80-9

CMF C24 H31 F9 O5



CM 2

CRN 116-14-3  
CMF C2 F4



IC ICM G03F007-039  
ICS G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 365568-38-3 819860-42-9 857285-72-4 862374-74-1  
862374-75-2 862374-77-4 862374-79-6  
862374-81-0 862374-83-2 862374-85-4  
(mixed solvents for F2 laser-sensitive pos.  
photoresists with high sensitivity)

L18 ANSWER 7 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2005:660751 HCAPLUS  
DOCUMENT NUMBER: 143:163080  
TITLE: Positive photoresist compositions with high resolution, good transparency to 157-nm lasers, and less scums and method for patterning thereof  
INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 56 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005202205	A2	20050728	JP 2004-9103	2004 0116
PRIORITY APPLN. INFO.: JP 2004-9103				2004 0116

AB The compns. contain (A) resins having repeating units [RaRbCC(CHRfOH)CO2R] (Ra, Rb = H, Me, F, CF3; R = H, monovalent organic group; Rf = fluoroalkyl), which can be decomposed by acids to increase solubility to alkali developers, and (B) compds. generating acids by actinic ray or radiation. In the process, the compns. are formed in to photoresist films, which are exposed and developed to give patterns.

IT 859846-00-72  
(photolithog. using pos. photoresist compns. with high resolution, good transparency to 157-nm lasers, and less scums)

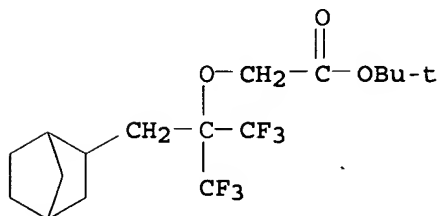
RN 859846-00-7 HCAPLUS  
CN Pentanoic acid, 4,4,5,5,5-pentafluoro-3-hydroxy-2-methylene-, 6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2

.1]hept-2-yl ester, polymer with 1,1-dimethylethyl  
 [1-(bicyclo[2.2.1]hept-2-ylmethyl)-2,2,2-trifluoro-1-  
 (trifluoromethyl)ethoxy]acetate and 6-[3,3,3-trifluoro-2-hydroxy-2-  
 (trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl  
 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 859845-99-1

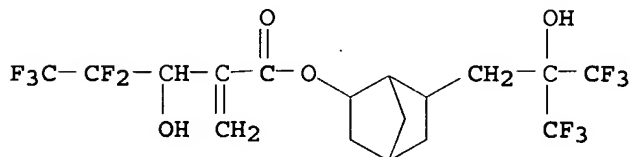
CMF C17 H24 F6 O3



CM 2

CRN 859845-97-9

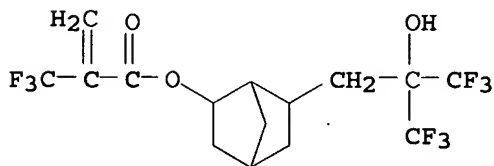
CMF C17 H17 F11 O4



CM 3

CRN 630115-55-8

CMF C15 H15 F9 O3



IC ICM G03F007-039

ICS C08F020-04; C08F020-26; C08F212-14; C08F214-18; C08F216-14;  
 C08F220-24; C08F232-08; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)

Section cross-reference(s): 35

IT 859845-87-7P 859845-89-9P 859845-90-2P 859845-92-4P  
 859845-94-6P 859845-96-8P 859845-98-0P **859846-00-7P**

(photolithog. using pos. photoresist  
comps. with high resolution, good transparency to 157-nm lasers,  
and less scums)

L18 ANSWER 8 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:614396 HCAPLUS

DOCUMENT NUMBER: 143:142748

TITLE: Positive photoresist compositions with high  
resolution and transparency to F2 excimer  
lasers and method for patterning thereof

INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2005189712	A2	20050714	JP 2003-433922	2003 1226
			JP 2003-433922	2003 1226

PRIORITY APPLN. INFO.:

AB The comps., showing low temperature dependence in PEB (post-exposure  
bake), comprise (A) F-containing (alicyclic hydrocarbon) polymers  
having plural dissimilar groups CO<sub>2</sub>CR<sub>1z</sub>R<sub>2z</sub>R<sub>3z</sub> [R<sub>1z</sub>-R<sub>3z</sub> =  
(cyclo)alkyl, alkenyl, aralkyl, aryl] and CO<sub>2</sub>CHR<sub>4z</sub>(OR<sub>5z</sub>) [R<sub>4z</sub> = H,  
(cyclo)alkyl, alkenyl, aralkyl, aryl; R<sub>5z</sub> = same as R<sub>1z</sub>] which can  
be decomposed by acids to increase alkali solubility and (B) compds.  
generating acids by actinic ray or radiation. In the process, the  
comps. are formed into photoresist films, which are exposed and  
developed to give patterns.

IT 857893-52-8P 857893-54-0P  
(pos. photoresist comps. with high resolution  
and transparency to F2 excimer lasers and low temperature dependence)

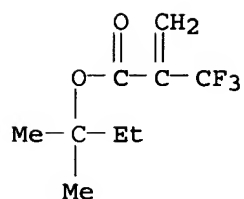
RN 857893-52-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-  
dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with  
1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-  
trifluoro-1-(trifluoromethyl)ethoxy]acetate and 1,1-dimethylpropyl  
2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 857893-50-6

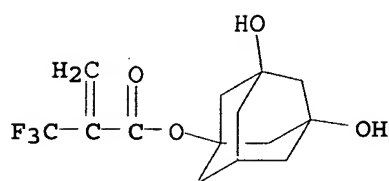
CMF C9 H13 F3 O2



CM 2

CRN 521913-16-6

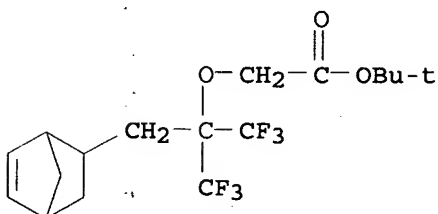
CMF C14 H17 F3 O4



CM 3

CRN 430436-69-4

CMF C17 H22 F6 O3



RN 857893-54-0. HCAPLUS

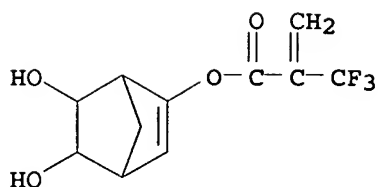
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylpropyl ester, polymer  
with 1,1-bis(trifluoromethyl)-3-butenyl 1,1-dimethylethyl  
carbonate and 5,6-dihydroxybicyclo[2.2.1]hept-2-en-2-yl  
2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 857893-53-9

CMF C11 H11 F3 O4

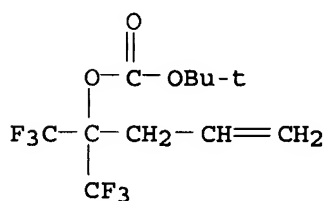




CM 2

CRN 468733-12-2

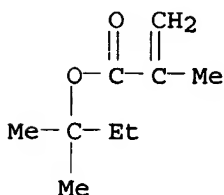
CMF C11 H14 F6 O3



CM 3

CRN 7383-24-6

CMF C9 H16 O2



IC ICM G03F007-039

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 857893-45-9P 857893-46-0P 857893-48-2P 857893-49-3P

857893-51-7P 857893-52-8P 857893-54-0P

(pos. photoresist compns. with high resolution  
and transparency to F2 excimer lasers and low temperature dependence)

L18 ANSWER 9 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:609162 HCAPLUS

DOCUMENT NUMBER: 143:123052

TITLE: Positive resist compositions and pattern  
formation using them

INVENTOR(S): Inabe, Haruki

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005189501	A2	20050714	JP 2003-430595	2003 1225

PRIORITY APPLN. INFO.: JP 2003-430595  
 2003  
 1225

AB The comps. comprise (A) F-containing polymers, whose solubility for alkali developers is increased by the action of acids and (B) acid-decomposable group-containing comps. generating acids by irradiation of actinic light ray or radiation. Patterns are formed by applying the comps., exposing the resulting films, and developing. The comps. show high sensitivity for 157 nm, high dissoln. contrast, and decreased development defects.

IT 857285-74-6P  
 (pos. resist comps. with high sensitivity  
 for 157-nm light for pattern formation)

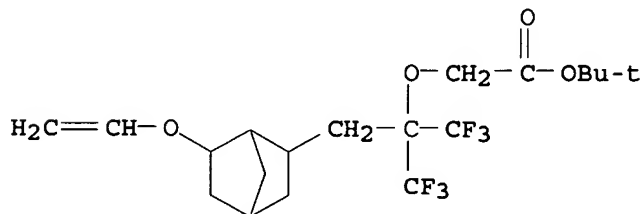
RN 857285-74-6 HCAPLUS

CN Acetic acid, [1-[[6-(ethenyloxy)bicyclo[2.2.1]hept-2-yl]methyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]-, 1,1-dimethylethyl ester, polymer with 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 857285-73-5

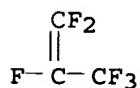
CMF C19 H26 F6 O4



CM 2

CRN 116-15-4

CMF C3 F6



IC ICM G03F007-004

ICS C08F012-22; C08F016-26; C08F032-00; G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 IT 365568-38-3P 430437-18-6P 607710-65-6P 857285-70-2P  
 857285-72-4P **857285-74-6P**

(pos. resist compns. with high sensitivity  
 for 157-nm light for pattern formation)

L18 ANSWER 10 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:408499 HCAPLUS

DOCUMENT NUMBER: 142:438709

TITLE: Positive-working resist composition sensitive  
 to excimer laser and pattern formation using  
 it

INVENTOR(S): Sasaki, Tomoya

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 93 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

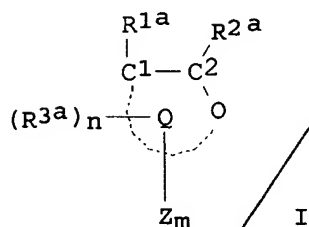
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005121857	A2	20050512	JP 2003-356000	2003 1016
PRIORITY APPLN. INFO.:			JP 2003-356000	2003 1016

GI



AB The composition contains (A) a polymer having repeating unit I [R1a, R2a = H, halo, alkyl; R3a = halo, OH, alkoxy, alkyl, cyano; Q = C≤7 groups forming a ring together with O and C; Z = (protected) alkaline-soluble group; m = 1-5; n = 0-5] and its solubility to alkaline developer increases by the action of an acid and (B) a compound generating acid by irradiation of actinic ray. Resist film from the composition is exposed and developed for pattern formation. The composition shows high sensitivity and transmissivity to ≤160 nm laser beam, especially F2 excimer laser beam, and shows good coatability, resolution, exposure latitude and dissoln. contrast.

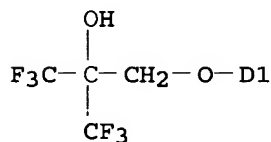
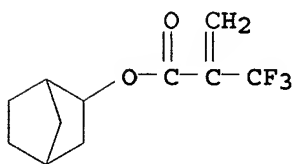
IT **851024-84-5**

(excimer laser-sensitive pos. resist composition  
 containing dihydropyran derivative polymer)

RN 851024-84-5 HCAPLUS  
 CN 2H-Pyran-2-acetic acid,  $\alpha,\alpha,2,3,3$ -pentafluoro-3,4-dihydro-, 1,1-dimethylethyl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propoxy]bicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

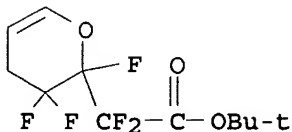
CM 1

CRN 851024-83-4  
 CMF C15 H15 F9 O4  
 CCI IDS



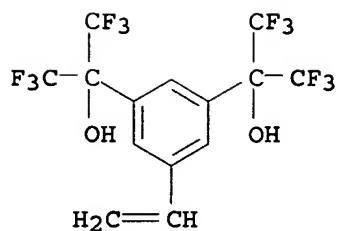
CM 2

CRN 851024-82-3  
 CMF C11 H13 F5 O3



CM 3

CRN 568587-26-8  
 CMF C14 H8 F12 O2



IC ICM G03F007-039  
ICS C08F234-00; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 851019-26-6 851019-28-8 851019-30-2 851024-81-2  
851024-84-5 851024-86-7  
(excimer laser-sensitive pos. resist composition containing dihydropyran derivative polymer)

L18 ANSWER 11 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:344568 HCAPLUS

DOCUMENT NUMBER: 142:400577

TITLE: Positive photoresist compositions for excimer lasers with good dry etching resistance and photolithography using them

INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

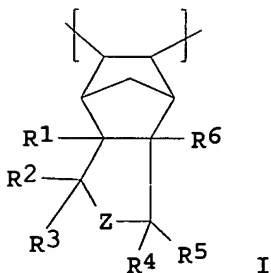
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005106908	A2	20050421	JP 2003-337007	2003 0929
PRIORITY APPLN. INFO.:				2003 0929

GI



AB The compns., particularly useful for F2 laser (157 nm), comprise (A) polymers having repeating units I (R1-6 = H, F, alkyl, OH, CO2R10; R10 = H, F, alkyl; Z = O, CR7R8, NR9; R7, R8 = H, F, alkyl, CO2R10; R9 = H, F, alkyl, OH, CO2R10; ≥1 of R1-9 = F, fluoroalkyl; ≥1 of R1-6, R9 = H, OH, alkyl, CO2R10), which increase their alkali solubility in the presence of acids and (B) photoacid generators.

IT 850165-79-6 850165-81-0

(chemical amplified pos. photoresists for excimer lasers with good dry etching resistance)

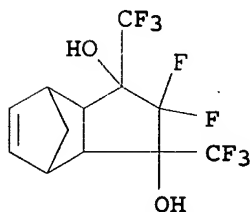
RN 850165-79-6 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with 2,2-difluoro-2,3,3a,4,7,7a-hexahydro-1,3-bis(trifluoromethyl)-4,7-methano-1H-indene-1,3-diol and 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate (9CI) (CA INDEX NAME)

CM 1

CRN 850165-78-5

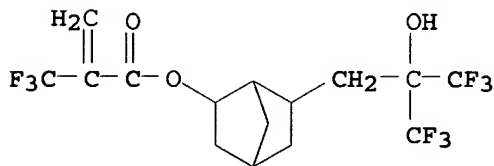
CMF C12 H10 F8 O2



CM 2

CRN 630115-55-8

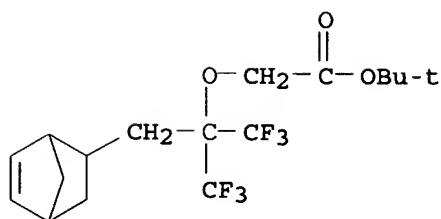
CMF C15 H15 F9 O3



CM 3

CRN 430436-69-4

CMF C17 H22 F6 O3



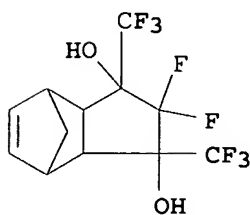
RN 850165-81-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with 2,2-difluoro-2,3,3a,4,7,7a-hexahydro-1,3-bis(trifluoromethyl)-4,7-methano-1H-indene-1,3-diol and 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 850165-78-5

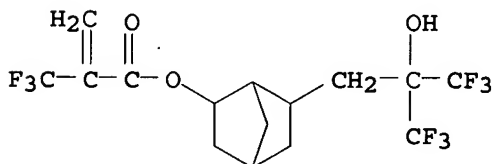
CMF C12 H10 F8 O2



CM 2

CRN 630115-55-8

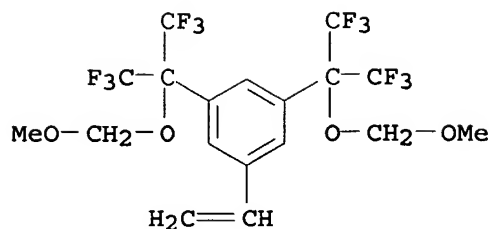
CMF C15 H15 F9 O3



CM 3

CRN 585573-59-7

CMF C18 H16 F12 O4



IC ICM G03F007-039  
ICS H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 850165-77-4 850165-79-6 850165-80-9  
850165-81-0 850165-82-1 850165-83-2  
(chemical amplified **pos. photoresists** for  
excimer lasers with good dry etching resistance)

L18 ANSWER 12 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:323249 HCAPLUS

DOCUMENT NUMBER: 142:400557

TITLE: Positive photoresist compositions with high resolution, less scums, and good transparency to 157-nm excimer lasers and patterning therewith

INVENTOR(S): Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 81 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005099156	A2	20050414	JP 2003-330213	2003 0922
PRIORITY APPLN. INFO.:				2003 0922

AB The compns., useful for fabrication of VLSI, etc., comprise (A) resins containing RaRbCCRC(CH<sub>2</sub>OZ) [Ra, Rb, Rc = H, Me, F, CN, CF<sub>3</sub>; Z = (hetero arom/containing) organic group] and RaRbCCRC(CO<sub>2</sub>Re) (Ra, Rb, Rc = same as above; Re = acid-decomposable group) which can be decomposed by acids to increase solubility to alkali developers and (B) compds. generating acids by actinic ray radiation.

IT 849766-45-6P

(patterning with **pos. photoresist** compns.  
with high resolution, less scums, and good transparency to 157-nm  
excimer lasers)

RN 849766-45-6 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with bicyclo[2.2.1]hept-5-ene-2-methanol and  $\alpha,\alpha$ -

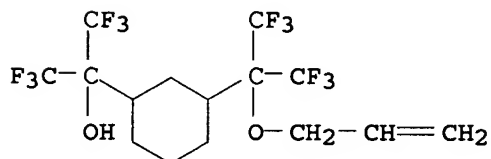


bis(trifluoromethyl)-3-[2,2,2-trifluoro-1-(2-propenyloxy)-1-(trifluoromethyl)ethyl]cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 849766-44-5

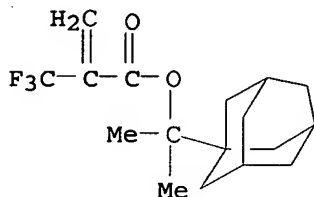
CMF C15 H16 F12 O2



CM 2

CRN 622378-55-6

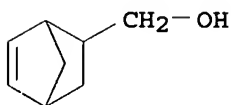
CMF C17 H23 F3 O2



CM 3

CRN 95-12-5

CMF C8 H12 O



IC ICM G03F007-039

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 849766-38-7P 849766-40-1P 849766-42-3P 849766-43-4P

849766-45-6P 849774-13-6P 849774-14-7P

(patterning with pos. photoresist compns.

with high resolution, less scums, and good transparency to 157-nm excimer lasers)

L18 ANSWER 13 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:302425 HCAPLUS

DOCUMENT NUMBER: 142:363786

TITLE: Positive photoresist compositions with high

INVENTOR(S): sensitivity and transparency to  $\leq 200$ -nm  
 laser lights and patterning therewith  
 PATENT ASSIGNEE(S): Sasaki, Tomoya  
 SOURCE: Fuji Photo Film Co., Ltd., Japan  
 Jpn. Kokai Tokkyo Koho, 67 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005091428	A2	20050407	JP 2003-321020	2003 0912
PRIORITY APPLN. INFO.:			JP 2003-321020	2003 0912

AB The compns., showing high transparency to F2 excimer lasers (157 nm), comprise (A) resins having R1R2CC(L1X1R3)COX2 units (R1, R2 = H, halo, CN, alkyl; R1 and/or R2 = F, fluoroalkyl; L1 = alkylene; X1 = O, S, OCO, NRbCO; X2 = ORa, SRa, NRaRb; Ra = H, organic group; Rb = H, alkyl), which are decomposed by acids to increase solubility to alkaline developers, and (B) compds. generating acids by actinic rays or radiation. Resist films formed from the compns. are exposed and developed to give fine patterns.

IT 849065-52-7P 849065-54-9P

(pos. photoresist compns. with high sensitivity and transparency to F2 excimer lasers)

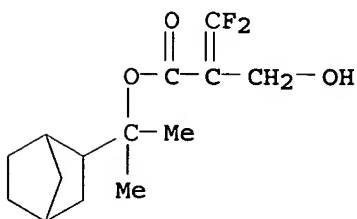
RN 849065-52-7 HCAPLUS

CN 2-Propenoic acid, 3,3-difluoro-2-(hydroxymethyl)-, 1-bicyclo[2.2.1]hept-2-yl-1-methylethyl ester, polymer with 5-ethenyl- $\alpha, \alpha, \alpha', \alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and 6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propoxy]bicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

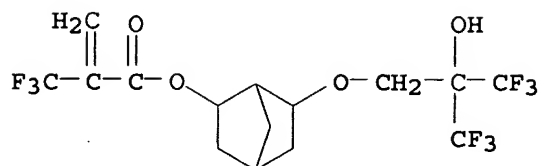
CRN 849065-51-6

CMF C14 H20 F2 O3



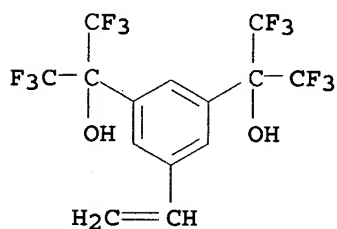
CM 2

CRN 782482-75-1  
CMF C15 H15 F9 O4



CM 3

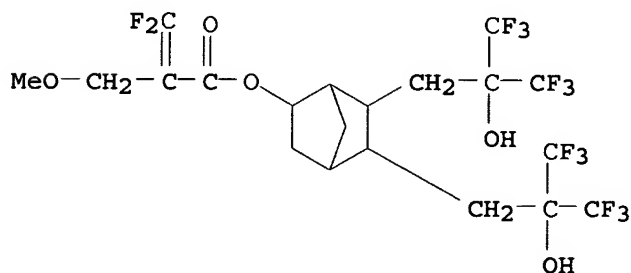
CRN 568587-26-8  
CMF C14 H8 F12 O2



RN 849065-54-9 HCAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 5,6-bis[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 3,3-difluoro-2-(methoxymethyl)-2-propenoate and α,α-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

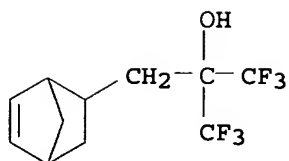
CM 1

CRN 849065-53-8  
CMF C20 H20 F14 O5



CM 2

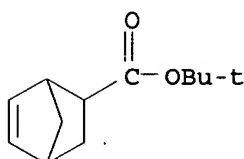
CRN 196314-61-1  
CMF C11 H12 F6 O



CM 3

CRN 154970-45-3

CMF C12 H18 O2



IC ICM G03F007-039  
 ICS C08F220-10; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 IT 849065-47-0P 849065-50-5P **849065-52-7P**  
**849065-54-9P** 849065-56-1P 849065-58-3P 849065-61-8P  
 849065-62-9P 849065-63-0P  
 (pos. photoresist compns. with high  
 sensitivity and transparency to F2 excimer lasers)

L18 ANSWER 14 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2005:235495 HCAPLUS  
 DOCUMENT NUMBER: 142:306451  
 TITLE: Storage-stable positive photoresists for F2  
 excimer laser lithography and patterning  
 thereof  
 INVENTOR(S): Sasaki, Tomoya  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 98 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005070327	A2	20050317	JP 2003-299022	2003 0822
PRIORITY APPLN. INFO.:				2003 0822
				2003 0822

AB The photoresists containing (A) fluororesins (preferable Markush given) having F-substituted main chain or sidechains and increasing alkali solubility by acid action and (B) photoacid generators and satisfying water content  $\leq 0.3\%$ , are pasted, exposed, and developed to form patterns with low line-edge roughness. The resin A may be replaced by a combination of alkali-soluble fluororesins and nonpolymeric dissoln. inhibitors.

IT 370102-83-3 585573-50-8 607710-77-0  
 610300-98-6 610301-01-4 610301-04-7  
 677354-71-1 847599-64-8 847599-67-1  
 847599-68-2 847599-69-3  
 (chemical amplified pos. resists containing decomposition-resistant fluororesins for F2 excimer laser lithog.)

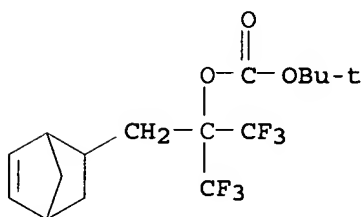
RN 370102-83-3 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with  $\alpha, \alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

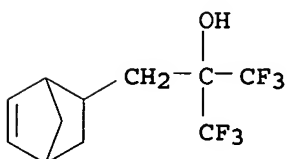
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



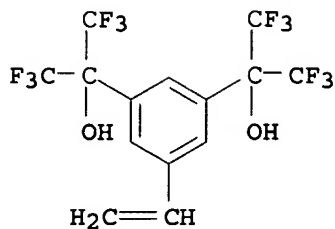
RN 585573-50-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-ethenyl- $\alpha, \alpha, \alpha', \alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

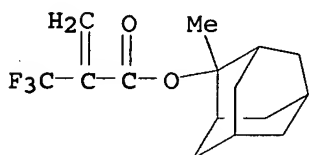
CMF C14 H8 F12 O2



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



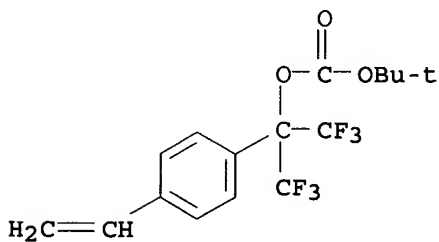
RN 607710-77-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

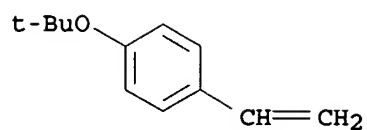
CMF C16 H16 F6 O3



CM 2

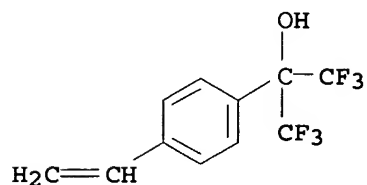
CRN 95418-58-9

CMF C12 H16 O



CM 3

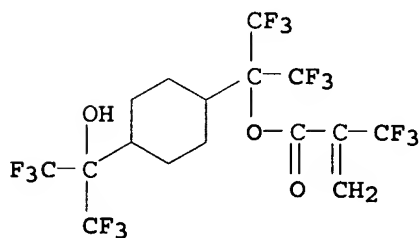
CRN 2386-82-5  
CMF C11 H8 F6 O



RN 610300-98-6 HCAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

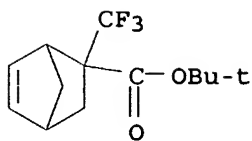
CM 1

CRN 479072-83-8  
CMF C16 H13 F15 O3



CM 2

CRN 365568-55-4  
CMF C13 H17 F3 O2



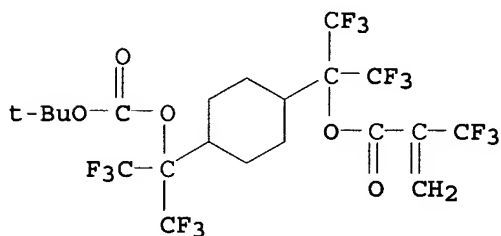
RN 610301-01-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

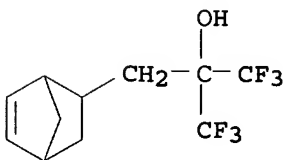
CMF C21 H21 F15 O5



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



RN 610301-04-7 HCAPLUS

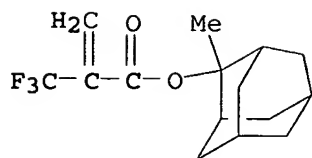
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl carbonate and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 188739-86-8

CMF C15 H19 F3 O2

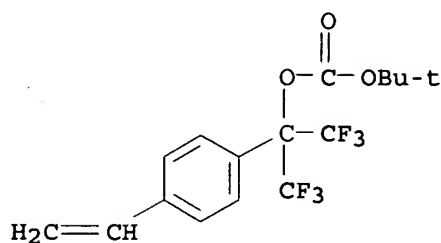




CM 2

CRN 143336-93-0

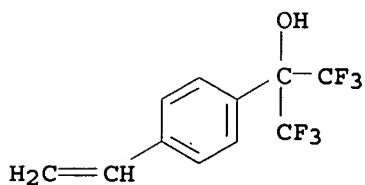
CMF C16 H16 F6 O3



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



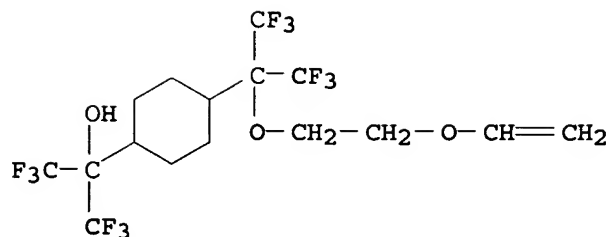
RN 677354-71-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 4-[1-[2-(ethenyloxy)ethoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 654076-29-6

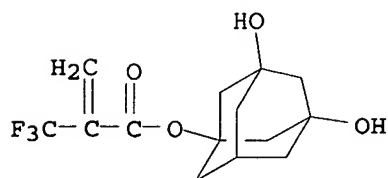
CMF C16 H18 F12 O3



CM 2

CRN 521913-16-6

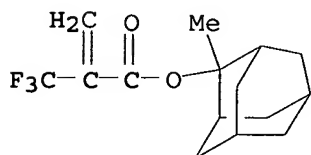
CMF C14 H17 F3 O4



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



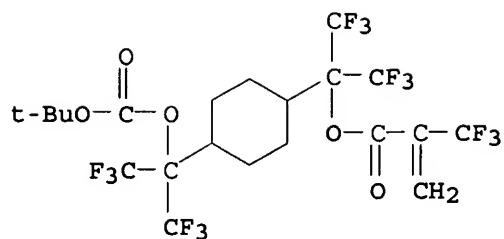
RN 847599-64-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

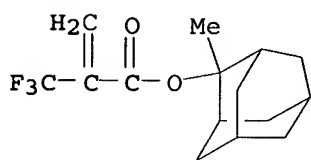
CMF C21 H21 F15 O5



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



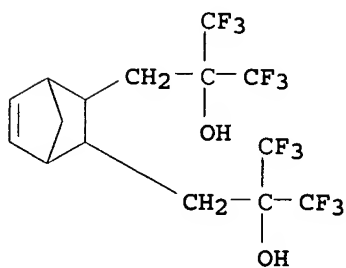
RN 847599-67-1 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
tetrafluoroethene and  $\alpha, \alpha, \alpha', \alpha'$ -  
tetrakis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2,3-diethanol  
(9CI) (CA INDEX NAME)

CM 1

CRN 782482-86-4

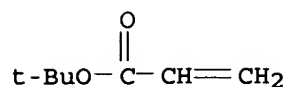
CMF C15 H14 F12 O2



CM 2

CRN 1663-39-4

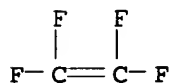
CMF C7 H12 O2



CM 3

CRN 116-14-3

CMF C2 F4



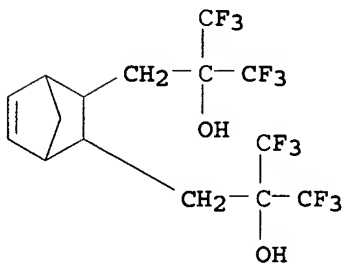
RN 847599-68-2 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with  $\alpha, \alpha, \alpha', \alpha'$ -tetrakis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2,3-diethanol (9CI) (CA INDEX NAME)

CM 1

CRN 782482-86-4

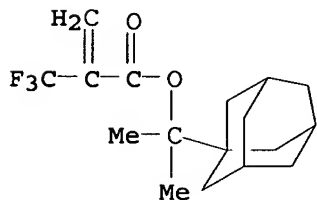
CMF C15 H14 F12 O2



CM 2

CRN 622378-55-6

CMF C17 H23 F3 O2



RN 847599-69-3 HCAPLUS

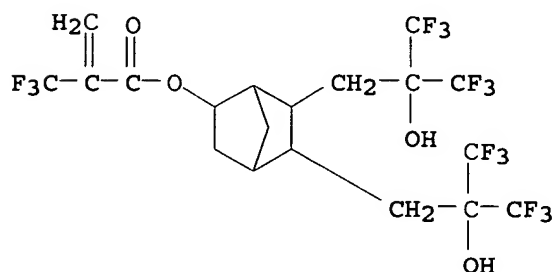
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-,

1,1-dimethylethyl ester, polymer with 5,6-bis[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 792287-44-6

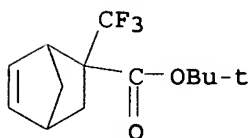
CMF C19 H17 F15 O4



CM 2

CRN 365568-55-4

CMF C13 H17 F3 O2



IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 370102-83-3 406702-00-9 430437-18-6

585573-50-8 607710-65-6 607710-77-0

610300-98-6 610301-01-4 610301-04-7

672937-76-7 677354-71-1 731861-92-0 731861-93-1

732299-47-7 762275-99-0 764717-25-1 836614-75-6

847599-64-8 847599-66-0 847599-67-1

847599-68-2 847599-69-3

(chemical amplified pos. resists containing decomposition-resistant fluoro-resins for F2 excimer laser lithog.)

L18 ANSWER 15 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:182220 HCAPLUS

DOCUMENT NUMBER: 142:287809

TITLE: Positive photoresist composition and pattern formation method using the same

INVENTOR(S): Mizutani, Kazuyoshi; Sasaki, Tomoya; Kanna, Shinichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 78 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005048402	A1	20050303	US 2004-929443	2004 0831
JP 2005107476	A2	20050421	JP 2004-47404	2004 0224
EP 1515186	A2	20050316	EP 2004-20764	2004 0901

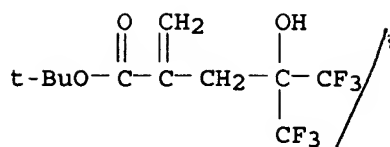
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
 MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,  
 EE, HU, PL, SK, HR

PRIORITY APPLN. INFO.: JP 2003-308699 A 2003  
 0901  
 JP 2003-318310 A 2003  
 0910  
 JP 2004-47404 A 2004  
 0224

AB The invention relates to a pos. resist composition comprising (A) a resin that is decomposed by the action of an acid to increase solubility in an alkali developing solution and includes a specific repeating unit and (B) a compound that generates an acid upon irradiation of an actinic ray or radiation, and a pattern formation method using the pos. resist composition

IT 847253-83-2P 847253-85-4P 847253-89-8P  
 847253-94-5P 847254-19-7P 847254-21-1P  
 847254-25-5P 847254-27-7P 847359-98-2P  
 (pos. resist composition and pattern formation  
 method using the same)

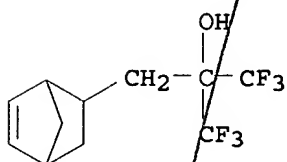
RN 847253-83-2 HCAPLUS  
 CN Pentanoic acid, 5,5,5-trifluoro-4-hydroxy-2-methylene-4-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and tetrafluoroethene (9CI) (CA INDEX NAME)



CM 2

CRN 196314-61-1

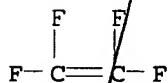
CMF C11 H12 F6 O



CM 3

CRN 116-14-3

CMF C2 F4



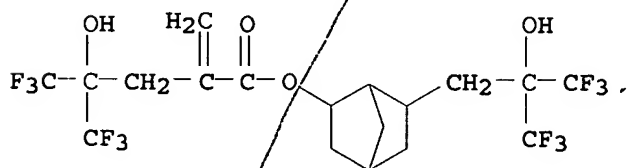
RN 847253-85-4 HCAPLUS

CM Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with tetrafluoroethene and 6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 5,5,5-trifluoro-4-hydroxy-2-methylene-4-(trifluoromethyl)pentanoate (9CI) (CA INDEX NAME)

CM 1

CRN 847253-84-3

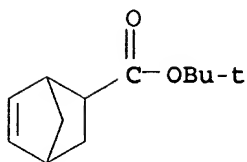
CMF C18 H18 F12 O4



CM 2

CRN 154970-45-3

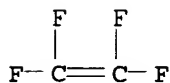
CMF C12 H18 O2



CM 3

CRN 116-14-3

CMF C2 F4



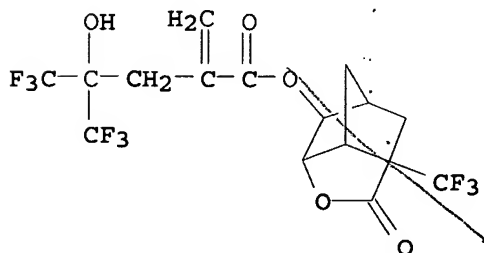
RN 847253-89-8 HCAPLUS

CMN Pentanoic acid, 5,5,5-trifluoro-4-hydroxy-2-methylene-4-(trifluoromethyl)-, 5,6-bis[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with hexahydro-2-oxo-3-(trifluoromethyl)-3,5-methano-2H-cyclopenta[b]furan-6-yl 5,5,5-trifluoro-4-hydroxy-2-methylene-4-(trifluoromethyl)pentanoate and 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl 2-[[[6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl]oxy]methyl]-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 847253-88-7

CMF C16 H13 F9 O5

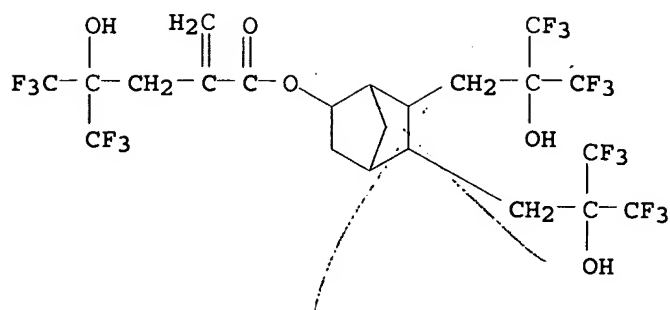


CM 2

CRN 847253-87-6

CMF C22 H20 F18 O5

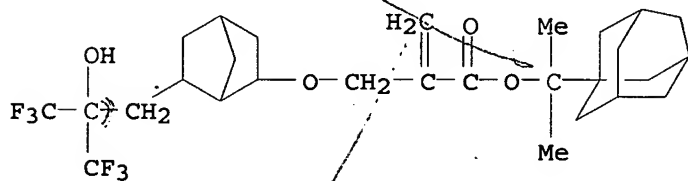




CM 3

CRN 847253-86-5

CMF C28 H38 F6 O4



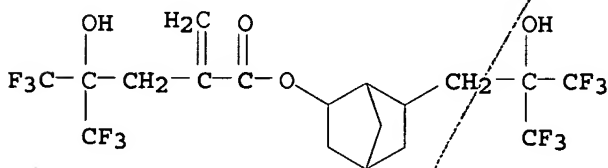
RN 847253-94-5 HCAPLUS

CN Pentanoic acid, 5,5,5-trifluoro-4-hydroxy-2-methylene-4-(trifluoromethyl)-, 6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with 2-fluoro- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-methanol and 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 847253-84-3

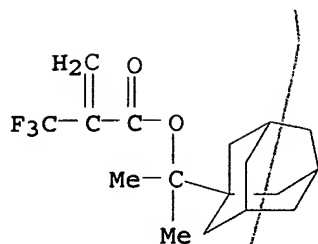
CMF C18 H18 F12 O4



CM 2

CRN 622378-55-6

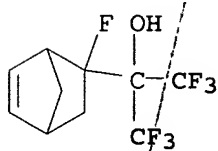
CMF C17 H23 F3 O2



CM 3

CRN 474516-20-6

CMF C10 H9 F7 O



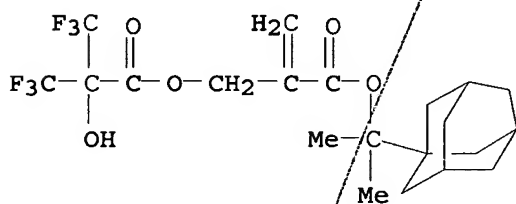
RN 847254-19-7 HCAPLUS

CN 2-Propenoic acid, 2-[[[3,3,3-trifluoro-2-hydroxy-1-oxo-2-(trifluoromethyl)propoxy)methyl]-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 5,6-dihydroxybicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 847254-18-6

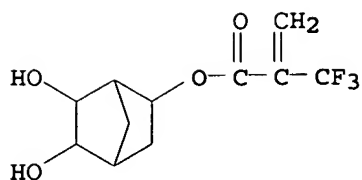
CMF C21 H26 F6 O5



CM 2

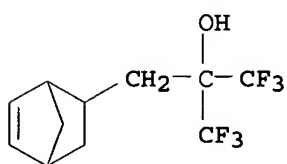
CRN 756532-33-9

CMF C11 H13 F3 O4



CM 3

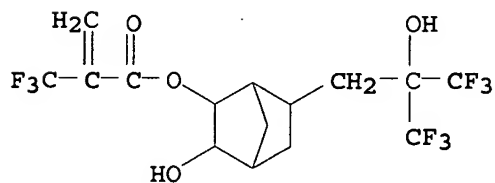
CRN 196314-61-1  
 CMF C11 H12 F6 O



RN 847254-21-1 HCAPLUS  
 CN 2-Propenoic acid, 2-[[[3,3,3-trifluoro-2-hydroxy-1-oxo-2-(trifluoromethyl)propoxy]methyl]-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with 3-hydroxy-6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate and 1,1,1-trifluoro-2-(trifluoromethyl)-4-penten-2-ol (9CI) (CA INDEX NAME)

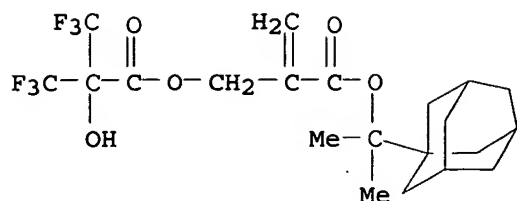
CM 1

CRN 847254-20-0  
 CMF C15 H15 F9 O4



CM 2

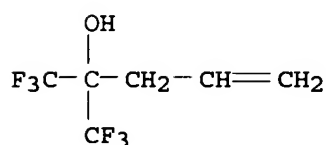
CRN 847254-18-6  
 CMF C21 H26 F6 O5



CM 3

CRN 646-97-9

CMF C6 H6 F6 O



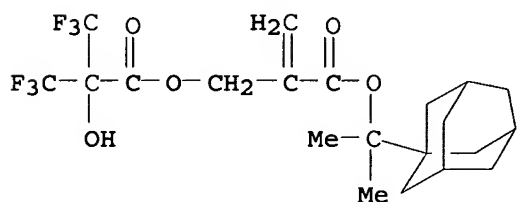
RN 847254-25-5 HCAPLUS

CN 2-Propenoic acid, 2-[[3,3,3-trifluoro-2-hydroxy-1-oxo-2-(trifluoromethyl)propoxy]methyl]-, 1-methyl-1-tricyclo[3.3.1.1.3,7]dec-1-ylethyl ester, polymer with 5,6-dihydroxybicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 847254-18-6

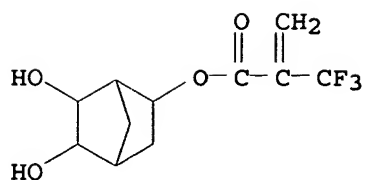
CMF C21 H26 F6 O5



CM 2

CRN 756532-33-9

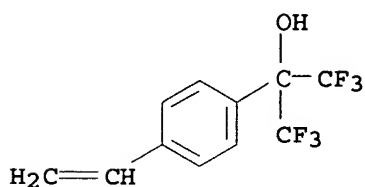
CMF C11 H13 F3 O4



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



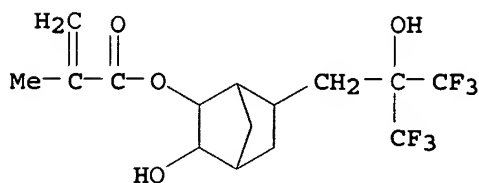
RN 847254-27-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxy-6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl 2-[[3,3,3-trifluoro-2-hydroxy-1-oxo-2-(trifluoromethyl)propoxy]methyl]-2-propenoate and 1,1,1-trifluoro-2-(trifluoromethyl)-4-penten-2-ol (9CI) (CA INDEX NAME)

CM 1

CRN 847254-26-6

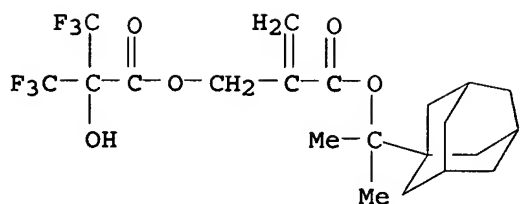
CMF C15 H18 F6 O4



CM 2

CRN 847254-18-6

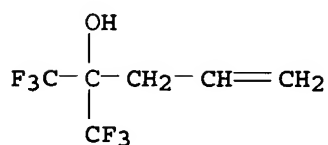
CMF C21 H26 F6 O5



CM 3

CRN 646-97-9

CMF C6 H6 F6 O



RN 847359-98-2 HCAPLUS

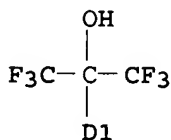
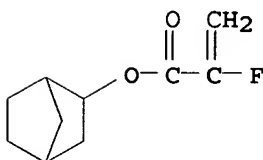
CN Pentanoic acid, 5,5,5-trifluoro-4-hydroxy-2-methylene-4-(trifluoromethyl)-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and 5(or 6)-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]bicyclo[2.2.1]hept-2-yl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 847359-97-1

CMF C13 H13 F7 O3

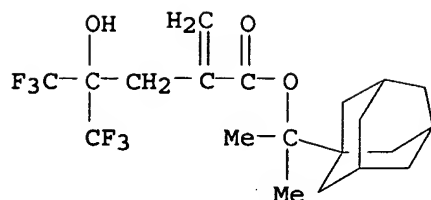
CCI IDS



CM 2

CRN 847359-96-0

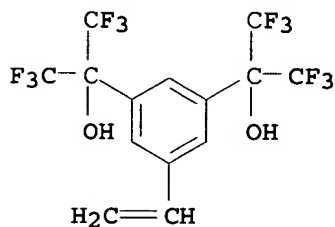
CMF C20 H26 F6 O3



CM 3

CRN 568587-26-8

CMF C14 H8 F12 O2



IC ICM G03C001-76

INCL 430281100; 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37

IT 428516-13-6P 847253-83-2P 847253-85-4P

847253-89-8P 847253-93-4P 847253-94-5P

847253-95-6P 847254-01-7P 847254-03-9P 847254-05-1P

847254-07-3P 847254-09-5P 847254-11-9P 847254-12-0P

847254-13-1P 847254-15-3P 847254-17-5P 847254-19-7P

847254-21-1P 847254-24-4P 847254-25-5P

847254-27-7P 847359-98-2P

(pos. resist composition and pattern formation method using the same)

L18 ANSWER 16 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:158320 HCAPLUS

DOCUMENT NUMBER: 142:249029

TITLE: Alkali-developable positive photoresist compositions for fluorine excimer lasers and submicron photolithography using them

INVENTOR(S): Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 71 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

JP 2005049767

A2

20050224

JP 2003-283990

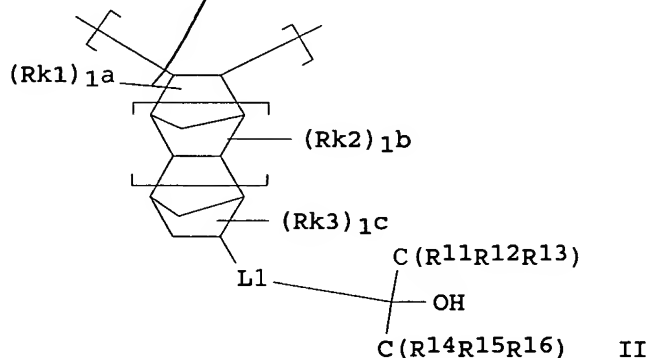
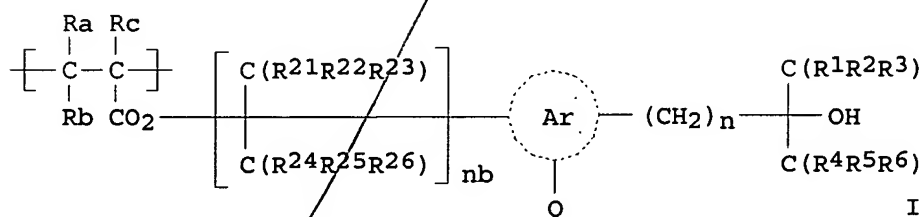
2003  
0731

PRIORITY APPLN. INFO.:

JP 2003-283990

2003  
0731

GI



AB The photoresist comps. comprise photoacid generators and polymers consisting of repeating units of (A) those selected from I (Ra, Rb, Rc = H, F, Me, fluoroalkyl; AR = alicyclic hydrocarbon group; Q = H, OH; R1-6 = H, F, fluoroalkyl,  $\geq 1$  of R1-6  $\neq$  H; R21-26 = same as R1-6; n, nb = 0, 1), II (Rk1, Rk2, Rk3 = halo, alkyl; L1 = single bond, divalent linking group; R11-16 = same as R1-6; m, la = 0, 1; lb = 0-2; lc = 0-5), and CH<sub>2</sub>CR1a[Y[COH(CR41R42R43)(CR44R45R46)]na] (Y = C<sub>6</sub>H<sub>5</sub>-na; R1a = H, F, Cl, Br, CN, CF<sub>3</sub>; R41-46 = same as R1-6; na = 1-5), (B) those selected from III (Ra, Rb, Rc, AR, Q, R21-26, nb = same as above; X1 = acid decomposable group), IV (Rm = F, CF<sub>3</sub>; X2 = same as X1; m = 0, 1), and CRaRbCRfCO<sub>2</sub>Rd (Ra, Rb = same as above; Rf = H, F, Me, CF<sub>3</sub>; Rd = same as X1), and (C) those having alicyclic groups that have substituents of OH or hydroxyalkyl.

IT 845274-57-9

(alkali-developable pos. photoresists for  
F2 excimer laser photolithog.)

RN 845274-57-9 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-propenoate, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and

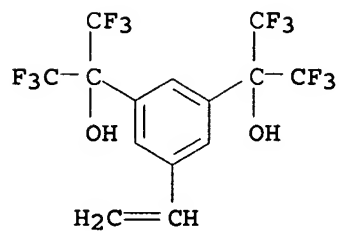


1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

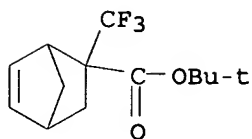
CMF C14 H8 F12 O2



CM 2

CRN 365568-55-4

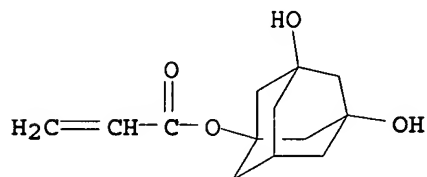
CMF C13 H17 F3 O2



CM 3

CRN 216581-85-0

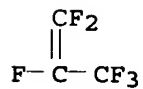
CMF C13 H18 O4



CM 4

CRN 116-15-4

CMF C3 F6



IC ICM G03F007-039  
ICS H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 845274-56-8 845274-57-9 845274-58-0 845274-59-1  
845275-25-4 845275-26-5 845275-27-6  
(alkali-developable pos. photoresists for  
F2 excimer laser photolithog.)

L18 ANSWER 17 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:140209 HCAPLUS

DOCUMENT NUMBER: 142:228731

TITLE: Chemically amplified positive photoresist compositions for F2 excimer lasers with good developability

INVENTOR(S): Fujimori, Toru

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 50 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005043723	A2	20050217	JP 2003-278546	2003 0723

PRIORITY APPLN. INFO.: JP 2003-278546

2003  
0723

AB The compns. comprise (A) fluoropolymers having F on the main chains and increasing their alkali solubility by acid decomposition, (B) photoacid generators, and (C) N compds. having  $\geq 1$  F.

IT 769193-83-1 769193-84-2 769195-17-7

769195-18-8 841257-47-4

(fluoropolymer pos. photoresist compns. for  
F2 excimer lasers with good developability)

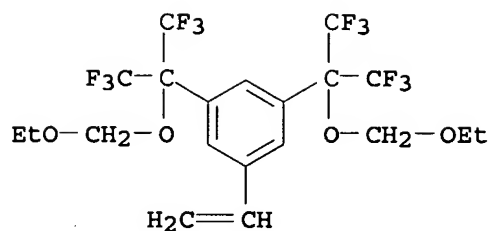
RN 769193-83-1 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha',\alpha'$ -  
tetrakis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene  
and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-40-6

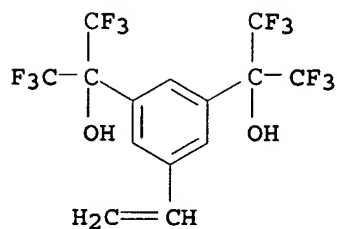
CMF C20 H20 F12 O4



CM 2

CRN 568587-26-8

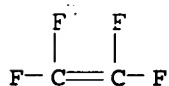
CMF C14 H8 F12 O2



CM 3

CRN 116-14-3

CMF C2 F4



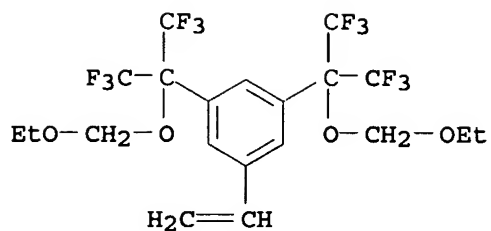
RN 769193-84-2 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-40-6

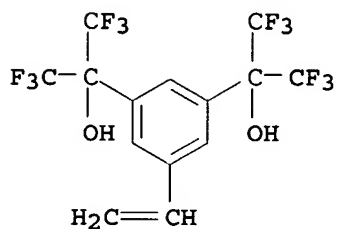
CMF C20 H20 F12 O4



CM 2

CRN 568587-26-8

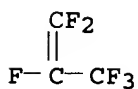
CMF C14 H8 F12 O2



CM 3

CRN 116-15-4

CMF C3 F6



RN 769195-17-7 HCAPLUS

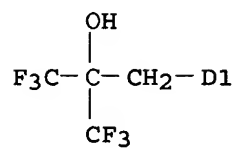
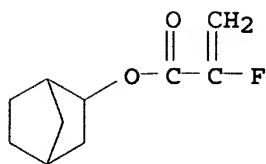
CN 2-Propenoic acid, 2-fluoro-, 5(or 6)-[2-[[[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, tetrafluoroethene and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 769195-16-6

CMF C14 H15 F7 O3

CCI IDS

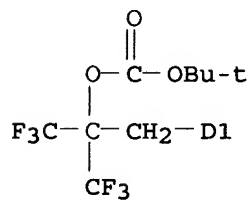
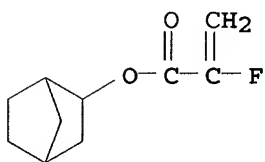


CM 2

CRN 769195-15-5

CMF C19 H23 F7 O5

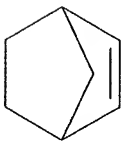
CCI IDS



CM 3

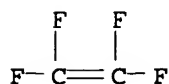
CRN 498-66-8

CMF C7 H10



CM 4

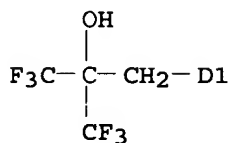
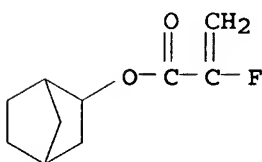
CRN 116-14-3  
CMF C2 F4



RN 769195-18-8 HCAPLUS  
CN 2-Propenoic acid, 2-fluoro-, 5(or 6)-[2-[[[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol, 1,1,2,3,3,3-hexafluoro-1-propene and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.1]hept-2-yl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

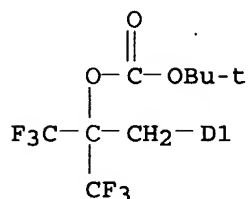
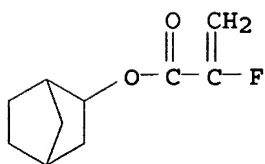
CM 1

CRN 769195-16-6  
CMF C14 H15 F7 O3  
CCI IDS



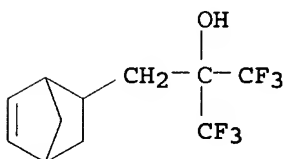
CM 2

CRN 769195-15-5  
CMF C19 H23 F7 O5  
CCI IDS



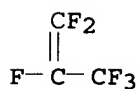
CM 3

CRN 196314-61-1  
 CMF C11 H12 F6 O



CM 4

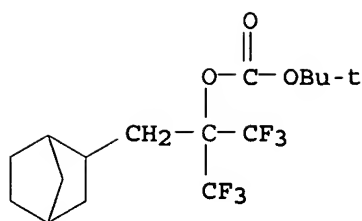
CRN 116-15-4  
 CMF C3 F6



RN 841257-47-4 HCAPLUS  
 CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-hydroxyethyl ester,  
 polymer with bicyclo[2.2.1]hept-5-ene-2,3-dimethanol,  
 1-(bicyclo[2.2.1]hept-2-ylmethyl)-2,2,2-trifluoro-1-  
 (trifluoromethyl)ethyl 1,1-dimethylethyl carbonate and  
 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

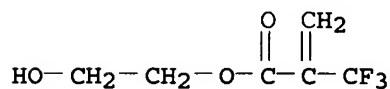
CRN 841257-46-3  
 CMF C16 H22 F6 O3



CM 2

CRN 450358-94-8

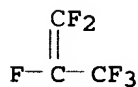
CMF C6 H7 F3 O3



CM 3

CRN 116-15-4

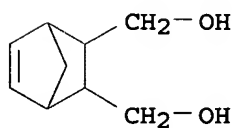
CMF C3 F6



CM 4

CRN 85-39-2

CMF C9 H14 O2



IC ICM G03F007-039

ICS C08F214-26; C08F232-04; G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 88-17-5 98-16-8 311-89-7 359-70-6 393-39-5 432-03-1

455-14-1 700-16-3 1513-65-1 2875-18-5 3048-01-9

3244-44-8 3796-24-5 735307-84-3 769193-80-8

769193-83-1 769193-84-2 769193-85-3

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769195-18-8 841257-44-1 841257-47-4

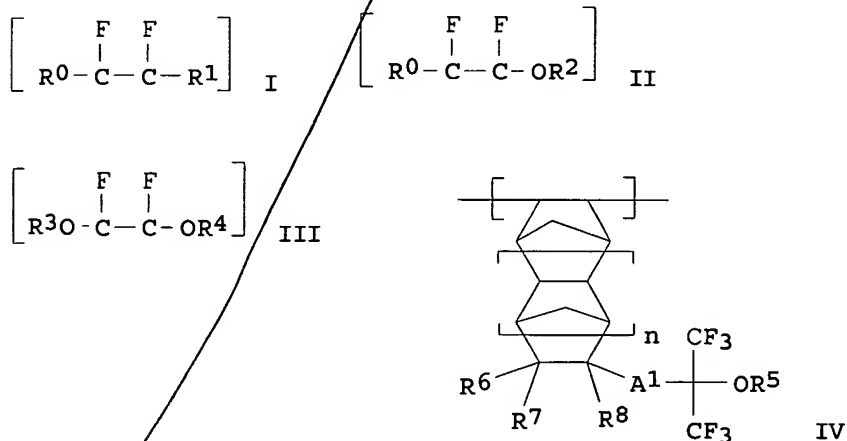
841257-49-6 841257-54-3 841257-58-7



L18 ANSWER 18 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2005:120282 HCAPLUS  
DOCUMENT NUMBER: 142:186557  
TITLE: Positive photoresist compositions containing  
fluoropolymers for F2 excimer laser light  
lithography  
INVENTOR(S): Fujimori, Toru  
PATENT ASSIGNEE(S): Fuji Photo Film Co. Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 63 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005037777	A2	<u>20050210</u>	JP 2003-276092	2003 0717
PRIORITY APPLN. INFO.:			JP 2003-276092	2003 0717

GI



AB The photoresist compns. having high sensitivity to F2 excimer laser light contain (A) fluoropolymers which contain F replacing polymer main chains, decompose with acids and increase solubility in alkali developers, (B) photoacid generators, and (C) compds. containing  $\geq 3$  OH or substituted OH. Preferably, the fluoropolymers A contain  $\geq 1$  of repeating units selected from  $\text{CF}_2\text{CFR}_1$ ,  $\text{CF}_2\text{CF}(\text{OR}_2)$ , and  $\text{CF}(\text{OR}_3)\text{CF}(\text{OR}_4)$  and  $\geq 1$  of repeating units selected from  $\text{CH}_2\text{CH}[\text{CH}_2\text{C}(\text{CF}_3)_2\text{OR}_5]$ . I.

CH2CR9[CO2A2C(CF3)2OR5], II, CHR13CR14(CO2R15), and III [R0, R1 = H, F, alkyl, cycloalkyl, aryl; R2-R4 = alkyl, cycloalkyl, aryl; R0 and R1, R0 and R2, and R3 and R4 may be bonded together and form ring; R5 = alkyl, cycloalkyl, acyl, alkoxycarbonyl; R6-R8 = H, halo, alkyl, alkoxy; R9, R10 = H, halo, cyano, alkyl; R11, R12 = H, OH, halo, cyano, alkoxy, acyl, alkyl, cycloalkyl, alkenyl, aralkyl, aryl; R13, R14 = H, halo, cyano, alkyl; R15 = CR36R37R38, CR36R37(OR39), IV; R36-R39 = alkyl, cycloalkyl, alkenyl, aralkyl, aryl;  $\geq 2$  of R36-R38, or R36, R37, and R39 may be bonded together and form ring; R40 = alkyl, cycloalkyl, alkenyl, alkynyl, aralkyl, aryl; Z = atom. group which form single or polycyclic alicyclic group with C atom; R16-R18 = H, halo, cyano, alky, alkoxy, CO2R15; A1, A2 = single bond, alkylene, alkenylene, cycloalkylene, divalent alicyclic group, divalent linking group formed by combination of these, O2CR22, CO2R23, CONR24R25; R22, R23, R25 = single bond, alkylene, alkenylene, cycloalkylene, arylene which may contain ether, ester, amide, urethane, or ureido group; R24 = H, alkyl, cycloalkyl, aralkyl, aryl; n = 0, 1; m = 1, 2].

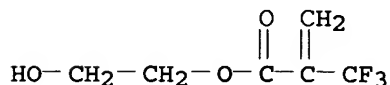
IT 769193-81-9P 769193-82-0P 769193-83-1P  
769193-84-2P 769195-17-7P 769195-18-8P  
(pos. photoresist compns. containing  
fluoropolymers, PAG, and saccharide derivs. for F2 excimer  
laser light lithog.)

RN 769193-81-9 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-hydroxyethyl ester,  
polymer with bicyclo[2.2.1]hept-5-ene-2,3-dimethanol,  
1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-  
(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate and  
1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 450358-94-8

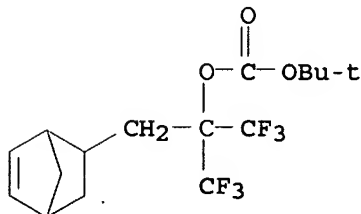
CMF C6 H7 F3 O3



CM 2

CRN 196314-63-3

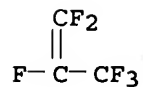
CMF C16 H20 F6 O3



CM 3

CRN 116-15-4

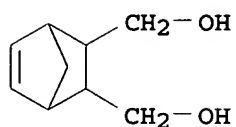
CMF C3 F6



CM 4

CRN 85-39-2

CMF C9 H14 O2



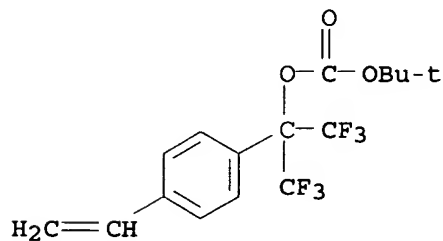
RN 769193-82-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

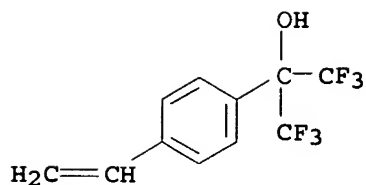
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

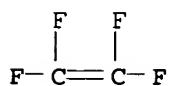
CMF C11 H8 F6 O



CM 3

CRN 116-14-3

CMF C2 F4



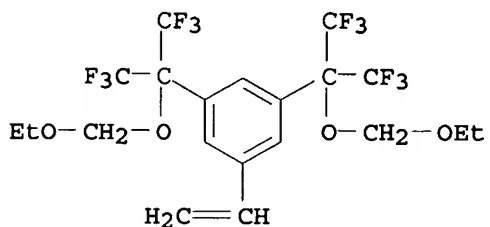
RN 769193-83-1 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -  
 tetrakis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[1-  
 (ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene  
 and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-40-6

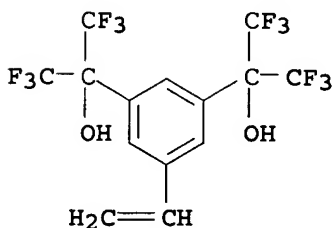
CMF C20 H20 F12 O4



CM 2

CRN 568587-26-8

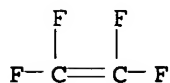
CMF C14 H8 F12 O2



CM 3

CRN 116-14-3

CMF C2 F4



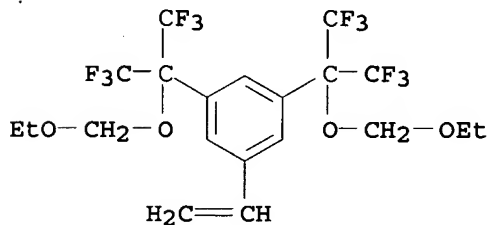
RN 769193-84-2 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -  
tetrakis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[1-  
(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene  
and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-40-6

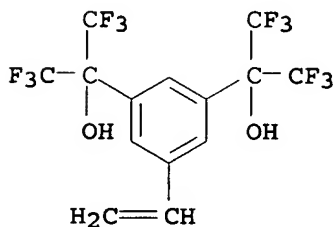
CMF C20 H20 F12 O4



CM 2

CRN 568587-26-8

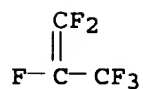
CMF C14 H8 F12 O2



CM 3

CRN 116-15-4

CMF C3 F6



RN 769195-17-7 HCAPLUS

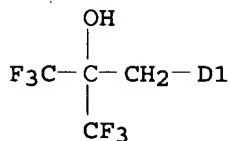
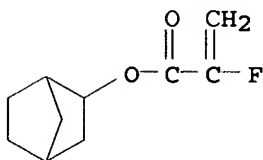
CN 2-Propenoic acid, 2-fluoro-, 5(or 6)-[2-[[[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, tetrafluoroethene and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.1]hept-2-yl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 769195-16-6

CMF C14 H15 F7 O3

CCI IDS

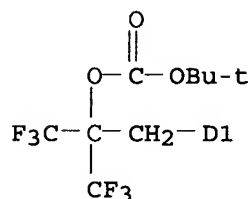
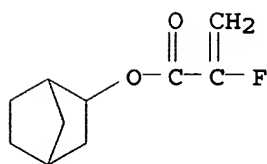


CM 2

CRN 769195-15-5

CMF C19 H23 F7 O5

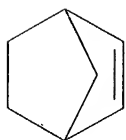
CCI IDS



CM 3

CRN 498-66-8

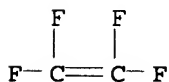
CMF C7 H10



CM 4

CRN 116-14-3

CMF C2 F4



RN 769195-18-8 HCAPLUS

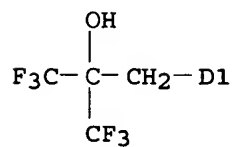
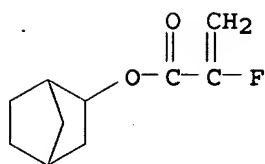
CN 2-Propenoic acid, 2-fluoro-, 5(or 6)-[2-[[[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol, 1,1,2,3,3,3-hexafluoro-1-propene and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 769195-16-6

CMF C14 H15 F7 O3

CCI IDS

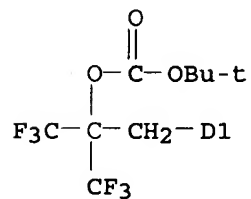
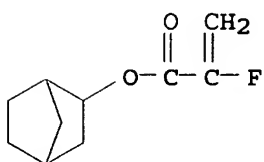


CM 2

CRN 769195-15-5

CMF C19 H23 F7 O5

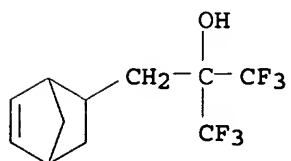
CCI IDS



CM 3

CRN 196314-61-1

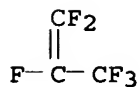
CMF C11 H12 F6 O



CM 4



CRN 116-15-4  
CMF C3 F6

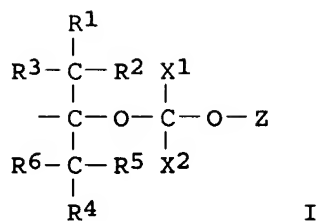


IC ICM G03F007-039  
ICS C08F014-18; C08F016-24; G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 262617-13-0P 735307-84-3P 769193-80-8P 769193-81-9P  
769193-82-0P 769193-83-1P 769193-84-2P  
769193-85-3P 769193-86-4P 769193-87-5P 769193-88-6P  
769193-89-7P 769195-17-7P 769195-18-8P  
835632-99-0P  
(pos. photoresist compns. containing  
fluoropolymers, PAG, and saccharide derivs. for F2 excimer  
laser light lithog.)

L18 ANSWER 19 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2005:116166 HCAPLUS  
DOCUMENT NUMBER: 142:207621  
TITLE: Positive resist composition and pattern  
formation method using the same  
INVENTOR(S): Mizutani, Kazuyoshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 53 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1505442	A1	20050209	EP 2004-18561	2004 0805
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2005055697	A2	20050303	JP 2003-286803	2003 0805
US 2005069808	A1	20050331	US 2004-911510	2004 0805
PRIORITY APPLN. INFO.:			JP 2003-286803	A 2003 0805

GI



AB A pos. resist composition comprises (A) a compound that generates an acid upon irradiation of an actinic ray or radiation and (B) a resin having a property of increasing solubility in an alkali developing solution by the action of an acid and including a repeating unit containing a partial structure represented by I (R<sup>1</sup>-6 = H, F, fluoroalkyl group; carbon C\* may be connected to a main chain of the resin directly or through a connecting group at any position of R<sup>1</sup>-3; X<sup>1,2</sup> = H, alkyl; Z = monovalent organic group having at least one cyclic hydrocarbon structure) and a repeating unit represented by formula CRa'Rb'CRc'Rd' (Ra', Rb', Rc' and Rd' = H, F, fluoroalkyl group, at least one of Ra' to Rd' is not a H atom).

IT 837427-99-3P 837428-05-4P 837428-08-7P

838826-20-3P 838826-21-4P

(pos. resist composition for pattern formation containing)

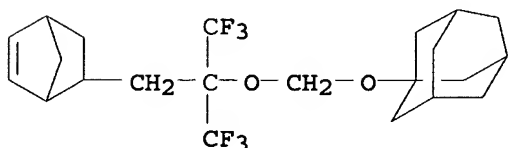
RN 837427-99-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-[[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]tricyclo[3.3.1.1<sup>3,7</sup>]decane, α,α-bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 837427-98-2

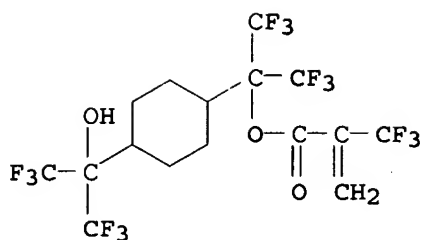
CMF C22 H28 F6 O2



CM 2

CRN 479072-83-8

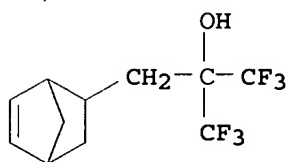
CMF C16 H13 F15 O3



CM 3

CRN 196314-61-1

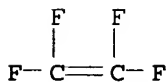
CMF C11 H12 F6 O



CM 4

CRN 116-14-3

CMF C2 F4



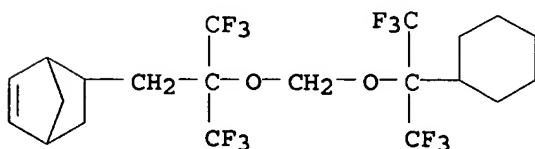
RN 837428-05-4 HCAPLUS

CN Tricyclo[3.3.1.1<sup>3,7</sup>]decane-1,3-diol, 5-(ethenyloxy)-, polymer with 1,3-bis[1-[[1-cyclohexyl-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-5-ethenylbenzene, 5-[2-[[1-cyclohexyl-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 837428-04-3

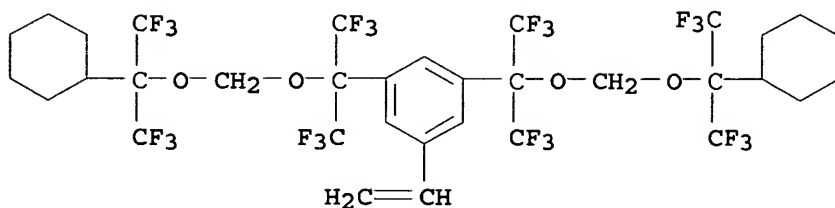
CMF C21 H24 F12 O2



CM 2

CRN 837428-03-2

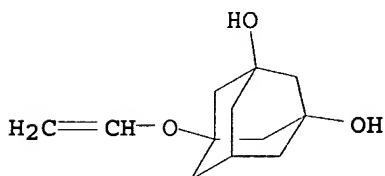
CMF C34 H32 F24 O4



CM 3

CRN 500541-89-9

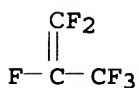
CMF C12 H18 O3



CM 4

CRN 116-15-4

CMF C3 F6



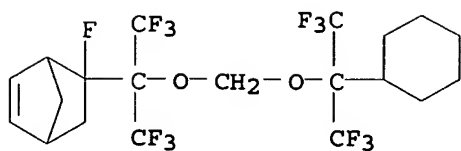
RN 837428-08-7 HCAPLUS

CN Tricyclo[3.3.1.1.3]decane-1,3-diol, 5-(ethenyloxy)-, polymer with 1,3-bis[1-[[1-cyclohexyl-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-5-ethenylbenzene, 5-[1-[[1-cyclohexyl-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-5-fluorobicyclo[2.2.1]hept-2-ene and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 837428-07-6

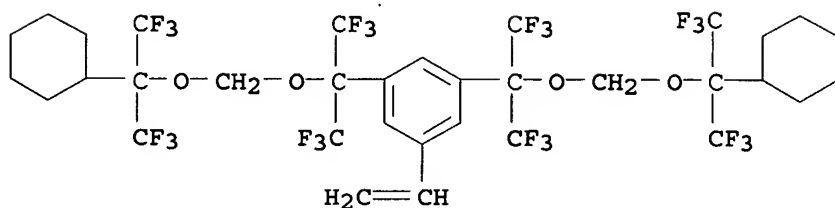
CMF C20 H21 F13 O2



CM 2

CRN 837428-03-2

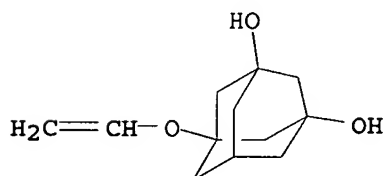
CMF C34 H32 F24 O4



CM 3

CRN 500541-89-9

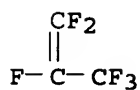
CMF C12 H18 O3



CM 4

CRN 116-15-4

CMF C3 F6



RN 838826-20-3 HCAPLUS

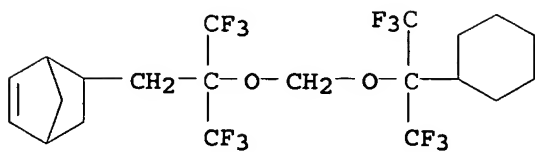
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol, 5-[2-[[1-cyclohexyl-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene and

tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 837428-04-3

CMF C21 H24 F12 O2

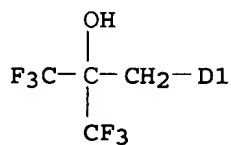
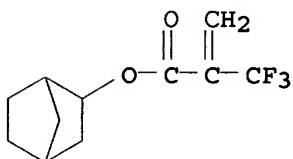


CM 2

CRN 585571-44-4

CMF C15 H15 F9 O3

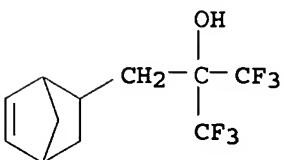
CCI IDS



CM 3

CRN 196314-61-1

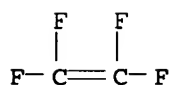
CMF C11 H12 F6 O



CM 4

CRN 116-14-3

CMF C2 F4



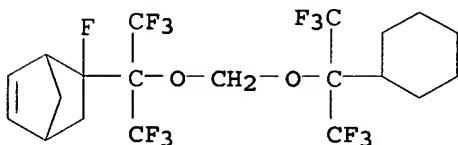
RN 838826-21-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with 5-[1-[[1-cyclohexyl-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-5-fluorobicyclo[2.2.1]hept-2-ene, 2-fluoro- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-methanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 837428-07-6

CMF C20 H21 F13 O2

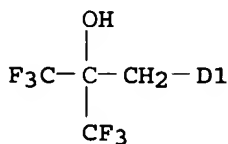
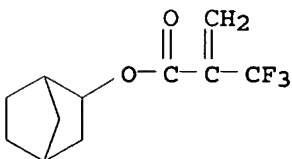


CM 2

CRN 585571-44-4

CMF C15 H15 F9 O3

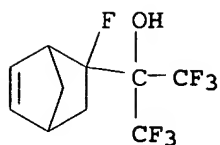
CCI IDS



CM 3

CRN 474516-20-6

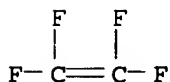
CMF C10 H9 F7 O



CM 4

CRN 116-14-3

CMF C2 F4



IC ICM G03F007-039

ICS G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 837427-97-1P 837427-99-3P 837428-02-1P

837428-05-4P 837428-06-5P 837428-08-7P

838826-20-3P 838826-21-4P

(pos. resist composition for pattern formation containing)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 20 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:98960 HCAPLUS

DOCUMENT NUMBER: 142:186548

TITLE: Positive resist composition

INVENTOR(S): Inabe, Haruki; Sasaki, Tomoya

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 57 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005026074	A1	20050203	US 2004-897122	2004 0723
JP 2005043819	A2	20050217	JP 2003-280237	2003 0725
PRIORITY APPLN. INFO.:			JP 2003-280237	A 2003 0725



AB A pos. resist composition comprises (A) a resin containing at least one group that is decomposed by the action of an acid to generate an alkali-soluble group and (B) at least two compds. selected from (B1) a compound that generates an aliphatic or aromatic sulfonic acid substituted with at least one fluorine atom, (B2) a compound that generates an aliphatic or aromatic sulfonic acid that does not contain a fluorine atom, (B3) a compound that generates an aliphatic or aromatic carboxylic acid substituted with at least one fluorine atom and (B4) a compound that generates an aliphatic or aromatic carboxylic acid that does not contain a fluorine atom, as (B) a compound that generates an acid upon irradiation of an actinic ray or radiation, wherein the group that is decomposed by the action of an acid contained in the resin.

IT 819860-23-6P 819860-29-2P 819866-27-8P  
819866-30-3P 835654-39-2P 835654-41-6P  
835654-44-9P 835654-47-2P 835654-49-4P  
(resin for pos. resist composition)

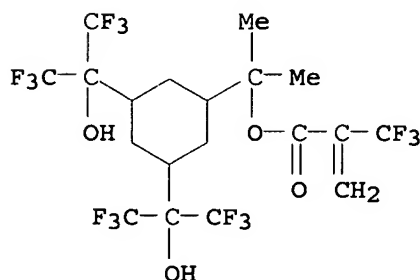
RN 819860-23-6 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[3,5-bis[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-methylethyl ester, polymer with 1,1,1-trifluoro-2-(trifluoromethyl)-4-penten-2-ol (9CI) (CA INDEX NAME)

CM 1

CRN 819860-22-5

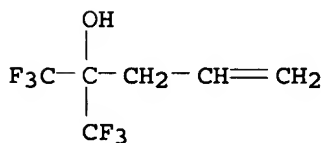
CMF C19 H19 F15 O4



CM 2

CRN 646-97-9

CMF C6 H6 F6 O



RN 819860-29-2 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-, polymer with 6,6'-[(5-ethenyl-1,3-phenylene)bis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxymethyleneoxy]]bis[ $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]

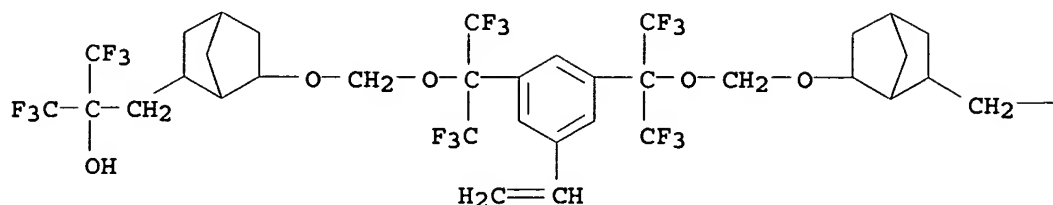
heptane-2-ethanol] (9CI) (CA INDEX NAME)

CM 1

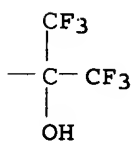
CRN 819860-28-1

CMF C38 H36 F24 O6

PAGE 1-A



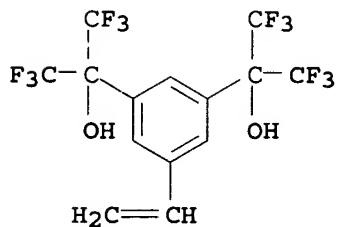
PAGE 1-B



CM 2

CRN 568587-26-8

CMF C14 H8 F12 O2



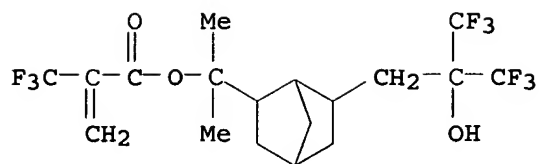
RN 819866-27-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-methyl-1-[6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl]ethyl ester, polymer with 5(or 6)-(ethenyloxy)- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 819860-41-8

CMF C18 H21 F9 O3

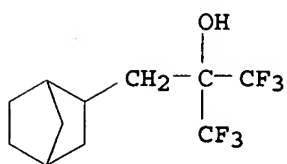


CM 2

CRN 634200-89-8

CMF C13 H16 F6 O2

CCI IDS

 $\text{H}_2\text{C}=\text{CH}-\text{O}-\text{D1}$ 

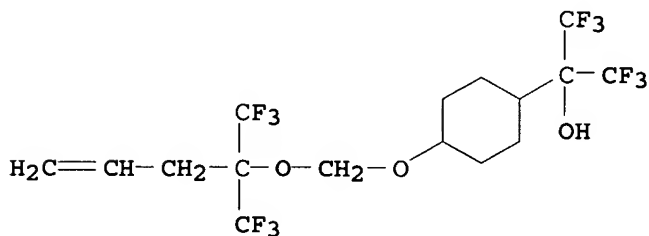
RN 819866-30-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with 4-[[[1,1-bis(trifluoromethyl)-3-butenyl]oxy]methoxy]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 819866-29-0

CMF C16 H18 F12 O3

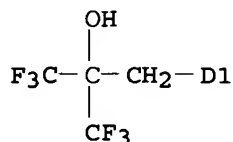
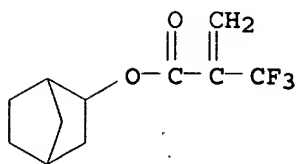


CM 2

CRN 585571-44-4

CMF C15 H15 F9 O3

CCI IDS



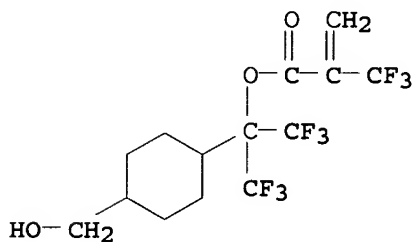
RN 835654-39-2 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-(hydroxymethyl)cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 5-[[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]methoxy]- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-cyclohexanedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 835654-38-1

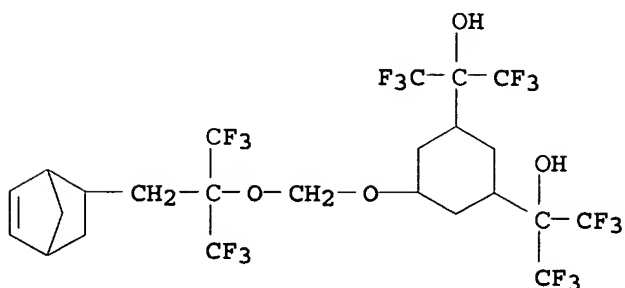
CMF C14 H15 F9 O3



CM 2

CRN 819860-30-5

CMF C24 H24 F18 O4



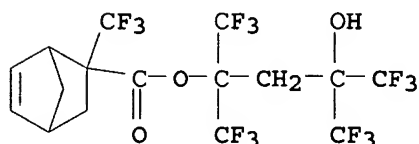
RN 835654-41-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-,  
4,4,4-trifluoro-3-hydroxy-1,1,3-tris(trifluoromethyl)butyl ester,  
polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 835654-40-5

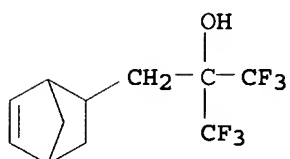
CMF C16 H11 F15 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



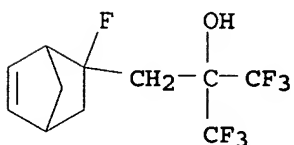
RN 835654-44-9 HCAPLUS

CN 1,3-Cyclohexanedimethanol, 5-[[2,2,2-trifluoro-1-[(2-fluorobicyclo[2.2.1]hept-5-en-2-yl)methyl]-1-(trifluoromethyl)ethoxy]methoxy]- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-, polymer with 2-fluoro- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-2-ene-2-ethanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 835654-43-8

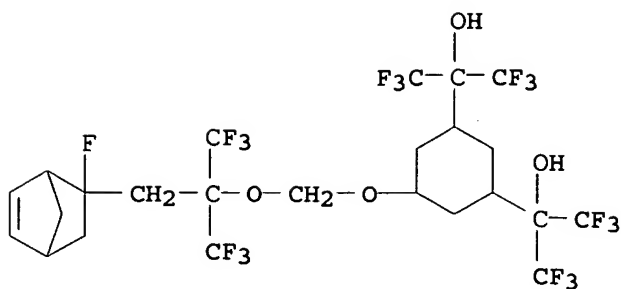
CMF C11 H11 F7 O



CM 2

CRN 835654-42-7

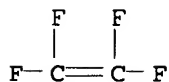
CMF C24 H23 F19 O4



CM 3

CRN 116-14-3

CMF C2 F4



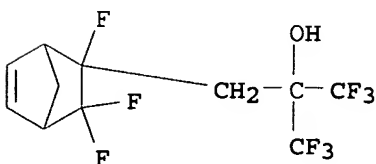
RN 835654-47-2 HCAPLUS

CN 1,3-Cyclohexanedimethanol,  $\alpha, \alpha, \alpha', \alpha'$ -  
 tetrakis(trifluoromethyl)-5-[[2,2,2-trifluoro-1-[(2,3,3-  
 trifluorobicyclo[2.2.1]hept-5-en-2-yl)methyl]-1-  
 (trifluoromethyl)ethoxy]methoxy]-, polymer with tetrafluoroethene  
 and 2,3,3-trifluoro- $\alpha, \alpha$ -bis(trifluoromethyl)bicyclo[2.  
 2.1]hept-2-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 835654-46-1

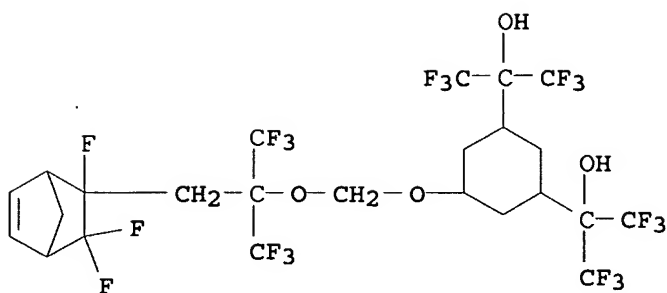
CMF C11 H9 F9 O



CM 2

CRN 835654-45-0

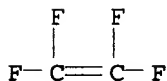
CMF C24 H21 F21 O4



CM 3

CRN 116-14-3

CMF C2 F4



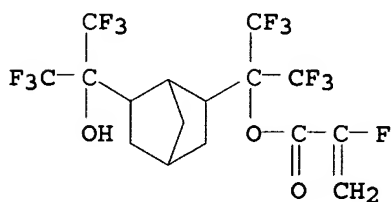
RN 835654-49-4 HCAPLUS

CN 2-Propenoic acid, 2-fluoro-, 2,2,2-trifluoro-1-[6-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]bicyclo[2.2.1]hept-2-yl]-1-(trifluoromethyl)ethyl ester, polymer with tetrafluoroethene and 2,3,3-trifluoro- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-2-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 835654-48-3

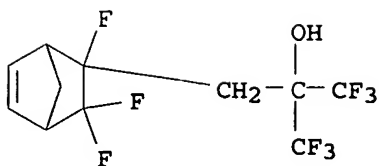
CMF C16 H13 F13 O3



CM 2

CRN 835654-46-1

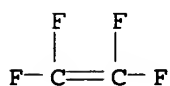
CMF C11 H9 F9 O



CM 3

CRN 116-14-3

CMF C2 F4



IC ICM G03C001-76

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 819860-23-6P 819860-25-8P 819860-27-0P

819860-29-2P 819860-36-1P 819866-27-8P

819866-30-3P 835654-37-0P 835654-39-2P

835654-41-6P 835654-44-9P 835654-47-2P

835654-49-4P 835655-05-5P

(resin for pos. resist composition)

L18 ANSWER 21 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:33944 HCAPLUS

DOCUMENT NUMBER: 142:123179

TITLE: Positive resist compositions for patterning using vacuum-ultraviolet ray

INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

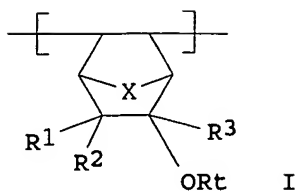
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005010392	A2	20050113	JP 2003-173560	2003 0618
PRIORITY APPLN. INFO.:				2003 0618

GI





AB The compns. comprise (A) polymers having repeating units I (R1-R3 = F, fluoroalkyl; Rt = H, acid-decomposable group; X = C1-2 hydrocarbyl, heteroatom), whose solubility for alkali developers is increased by the action of acids, and (B) acid-generating compds. by irradiation of actinic light beam or radiation. The compns. are useful for manufacture of semiconductor devices. The compns. show high transmittance for 157-nm F2 excimer laser light and good compatibility with developers.

IT 821793-75-3P

(pos. resist compns. with high transmittance to vacuum-UV ray for semiconductor fabrication)

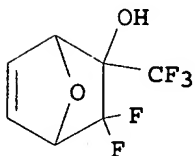
RN 821793-75-3 HCAPLUS

CN 7-Oxabicyclo[2.2.1]hept-5-en-2-ol, 3,3-difluoro-2-(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 821793-69-5

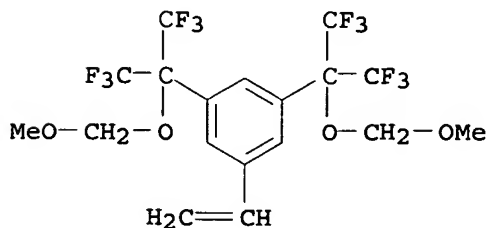
CMF C7 H5 F5 O2



CM 2

CRN 585573-59-7

CMF C18 H16 F12 O4



IC ICM G03F007-039

ICS C08F210-02; C08F212-08; C08F216-00; C08F220-10; C08F232-04;

H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

IT 821793-60-6P 821793-64-0P 821793-67-3P 821793-70-8P  
821793-73-1P 821793-75-3P 821793-77-5P

(pos. resist compns. with high transmittance to vacuum-UV ray for semiconductor fabrication)

L18 ANSWER 22 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1125837 HCAPLUS

DOCUMENT NUMBER: 142:82287

TITLE: Chemically amplified positive photoresist compositions with good alkali developability, line edge roughness, and transparency to F2 excimer laser beams

INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 40 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004361579	A2	2004-12-24	JP 2003-158305	2003 0603

PRIORITY APPLN. INFO.: JP 2003-158305

2003  
0603

AB The compns. comprise (A) photoacid generators and (B) resins that increase their alkali solubility in the presence of acids, wherein the resins have repeating units CR<sub>1</sub>R<sub>2</sub>C(OR<sub>3</sub>)R<sub>0</sub> (R<sub>0</sub> = F, fluoroalkyl; R<sub>1</sub>, R<sub>2</sub> = H, F, fluoroalkyl; R<sub>3</sub> = alkyl, L(CO<sub>2</sub>X)<sub>n1</sub>, L(OX)<sub>n2</sub>; L = linking group; X = H, acid-dissociable group; n<sub>1</sub>, n<sub>2</sub> = 1-3). The resins may further have vinyl ether-based repeating units.

IT 811804-99-6P 811805-03-5P

(chemical amplified pos. photoresists with good alkali developability, line edge roughness, and transparency to F2 excimer laser beams)

RN 811804-99-6 HCAPLUS

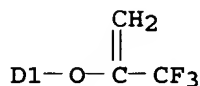
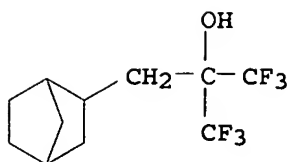
CN Bicyclo[2.2.1]heptane-2-ethanol,  $\alpha,\alpha$ -bis(trifluoromethyl)-5(or 6)-[[1-(trifluoromethyl)ethenyl]oxy]-, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 811804-81-6

CMF C14 H15 F9 O2

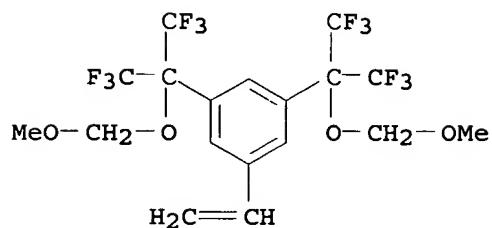
CCI IDS



CM 2

CRN 585573-59-7

CMF C18 H16 F12 O4



RN 811805-03-5 HCAPLUS

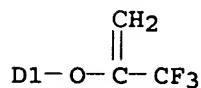
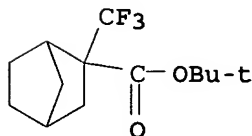
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 2-(trifluoromethyl)-5(or 6)-[[1-(trifluoromethyl)ethenyl]oxy]-, 1,1-dimethylethyl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 811804-90-7

CMF C16 H20 F6 O3

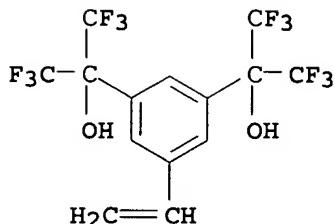
CCI IDS



CM 2

CRN 568587-26-8

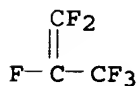
CMF C14 H8 F12 O2



CM 3

CRN 116-15-4

CMF C3 F6



IC ICM G03F007-039

ICS C08F216-14; C08F220-24; C08F232-00; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 811804-82-7P 811804-86-1P 811804-91-8P 811804-93-0P  
811804-99-6P 811805-03-5P

(chemical amplified pos. photoresists with good alkali developability, line edge roughness, and transparency to F2 excimer laser beams)

L18 ANSWER 23 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1125836 HCAPLUS

DOCUMENT NUMBER: 142:82286

TITLE: Chemically amplified excimer laser-sensitive photoimaging compositions with suppressed dependence on post-exposure baking temperature

INVENTOR(S): Kodama, Kunihiro; Sato, Kenichiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 69 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004361577	A2	2004-12-24	JP 2003-158303	2003 0603

USHA SHRESTHA EIC 1700 REM 4B28

PRIORITY APPLN. INFO.:

JP 2003-158303

2003

0603

AB The comps. comprise (A) carboxy-containing photoacid generators (PAG) and (B) resins that increase their alkali solubility in the presence of acids, wherein the resins have  $\geq 1$  groups selected from acid-dissociable acetal groups and tertiary ester groups. The PAG may be sulfonium salts. The resins may contain F and/or alicyclic hydrocarbon structures.

IT 143336-94-1 370102-83-3 585573-50-8  
607710-71-4 607710-72-5 610300-97-5  
610300-98-6 610301-01-4 677354-71-1  
762274-05-5

(chemical amplified excimer laser-sensitive pos.  
photoresists with suppressed dependence on  
post-exposure baking temperature)

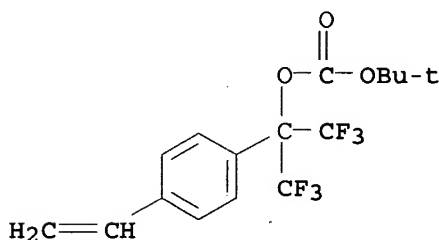
RN 143336-94-1 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

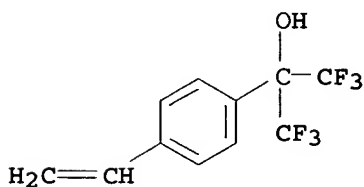
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



RN 370102-83-3 HCAPLUS

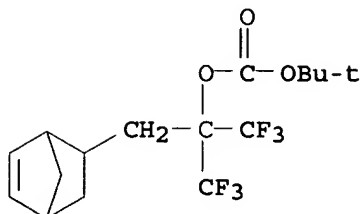
CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hep

t-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

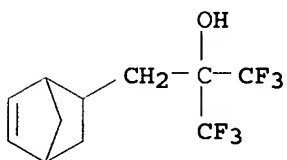
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



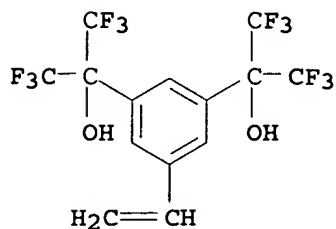
RN 585573-50-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

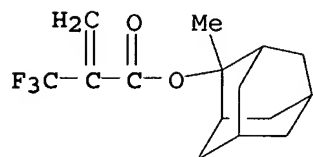
CMF C14 H8 F12 O2



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



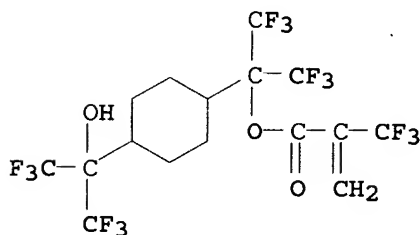
RN 607710-71-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-(2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl)cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

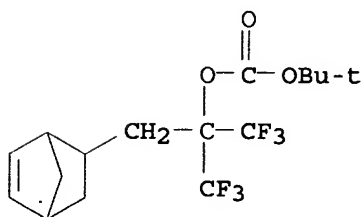
CMF C16 H13 F15 O3



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3

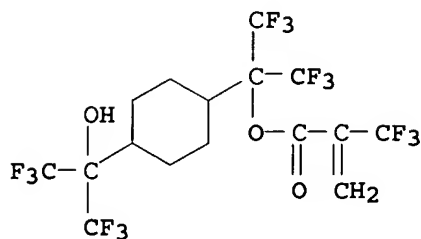


RN 607710-72-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl)cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

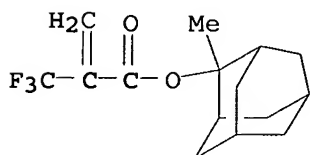
CM 1

CRN 479072-83-8  
CMF C16 H13 F15 O3



CM 2

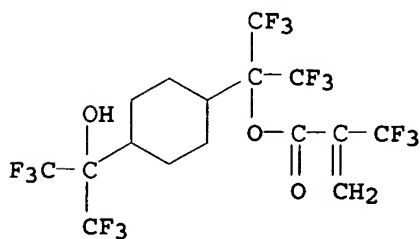
CRN 188739-86-8  
CMF C15 H19 F3 O2



RN 610300-97-5 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 5-[2-(ethoxymethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

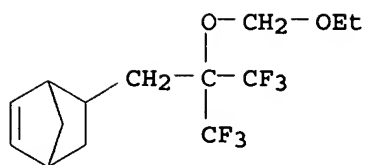
CRN 479072-83-8  
CMF C16 H13 F15 O3



CM 2

CRN 328114-61-0  
CMF C14 H18 F6 O2





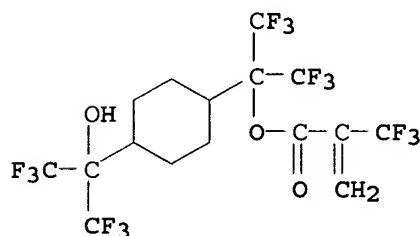
RN 610300-98-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

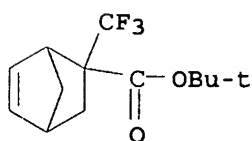
CMF C16 H13 F15 O3



CM 2

CRN 365568-55-4

CMF C13 H17 F3 O2



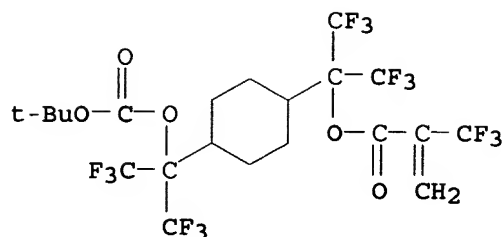
RN 610301-01-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

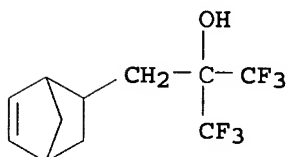
CMF C21 H21 F15 O5



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



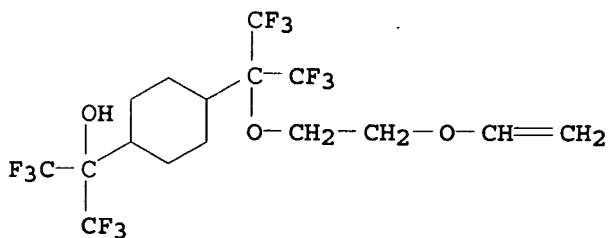
RN 677354-71-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 4-[1-[2-(ethenyloxy)ethoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 654076-29-6

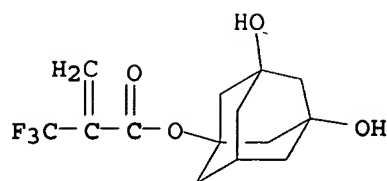
CMF C16 H18 F12 O3



CM 2

CRN 521913-16-6

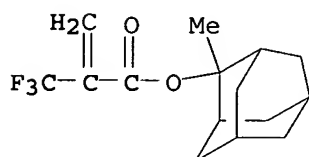
CMF C14 H17 F3 O4



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



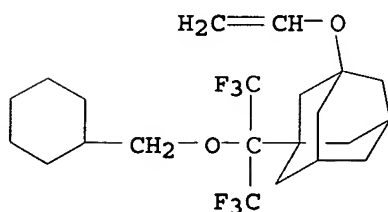
RN 762274-05-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[3-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]tricyclo[3.3.1.13,7]dec-1-yl]-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 1-[1-(cyclohexylmethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-3-(ethenyloxy)tricyclo[3.3.1.13,7]decane (9CI) (CA INDEX NAME)

CM 1

CRN 762274-04-4

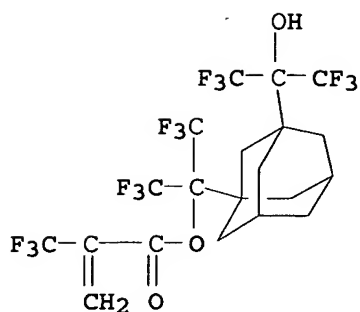
CMF C22 H30 F6 O2



CM 2

CRN 665028-67-1

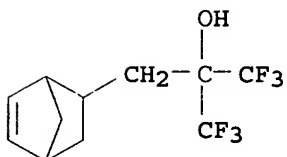
CMF C20 H17 F15 O3



CM 3

CRN 196314-61-1

CMF C11 H12 F6 O



IC ICM G03F007-039  
ICS G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 143336-94-1 250378-10-0 262617-13-0 289623-64-9  
312620-54-5 366808-82-4 370102-83-3 370866-39-0  
391232-36-3 391613-77-7 398140-38-0 398140-43-7  
398140-45-9 398140-57-3 398140-59-5 398140-68-6  
398140-80-2 405509-19-5 406702-00-9 430437-18-6  
482609-97-2 508210-04-6 515876-73-0 521303-15-1  
521303-16-2 524699-47-6 574735-94-7 585573-50-8  
607710-65-6 607710-71-4 607710-72-5  
607710-73-6 610300-92-0 610300-93-1 610300-94-2  
610300-95-3 610300-97-5 610300-98-6  
610301-01-4 615278-35-8 677351-20-1  
677354-71-1 679804-77-4 680603-11-6 731862-28-5  
732299-47-7 762274-02-2 762274-05-5 762275-99-0  
812692-79-8 812692-81-2 812692-82-3 812692-84-5  
812692-86-7

(chemical amplified excimer laser-sensitive pos.  
photoresists with suppressed dependence on  
post-exposure baking temperature)

L18 ANSWER 24 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1125828 HCAPLUS

DOCUMENT NUMBER: 142:65320

TITLE: Positive photoresist compositions with  
excellent vacuum UV sensitivity and alkali  
developability

INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 42 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004361473	A2	2004-12-24	JP 2003-156566	2003 0602

PRIORITY APPLN. INFO.: JP 2003-156566  
 2003  
 0602

AB The compns., showing good sensitivity to F2 excimer laser (157 nm), contain alkali-developable polymers having units CR1R2CR3(LMR4) (R1,2 = H, F, fluorinated alkyl; R3 = F, fluorinated alkyl; R4 = H, polar group, acid-decomposable group; L = alkylene; M = single bond, divalent linking group) and photoacid generators.

IT 811437-12-4 811437-20-4 811437-21-5  
 (pos. photoresist compns. containing fluoroalkyl-containing acrylate polymers with good vacuum UV sensitivity and alkali developability)

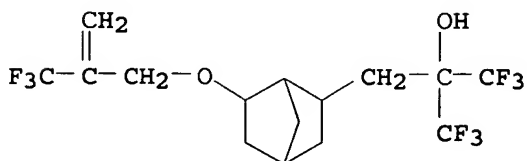
RN 811437-12-4 HCAPLUS

CN Acetic acid, [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]-, 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)-6-[[2-(trifluoromethyl)-2-propenyl]oxy]bicyclo[2.2.1]heptane-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 811437-11-3

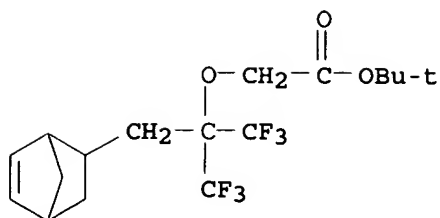
CMF C15 H17 F9 O2



CM 2

CRN 430436-69-4

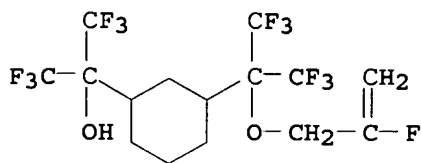
CMF C17 H22 F6 O3



RN 811437-20-4 HCAPLUS  
 CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 6-(ethenyloxy)-2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 3-[2,2,2-trifluoro-1-[(2-fluoro-2-propenyl)oxy]-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

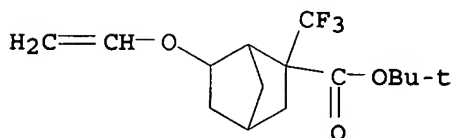
CM 1

CRN 811437-19-1  
 CMF C15 H15 F13 O2



CM 2

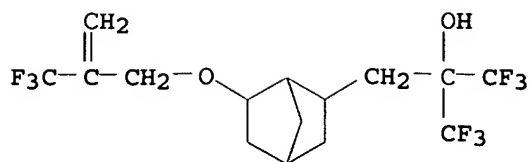
CRN 634920-64-2  
 CMF C15 H21 F3 O3



RN 811437-21-5 HCAPLUS  
 CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)-6-[[2-(trifluoromethyl)-2-propenyl]oxy]bicyclo[2.2.1]heptane-2-ethanol and 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

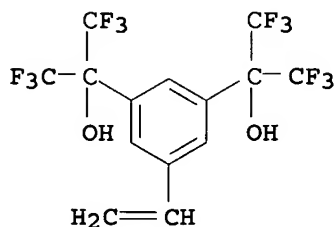
CRN 811437-11-3  
 CMF C15 H17 F9 O2



CM 2

CRN 568587-26-8

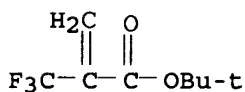
CMF C14 H8 F12 O2



CM 3

CRN 105935-24-8

CMF C8 H11 F3 O2



IC ICM G03F007-039

ICS C08F216-14; C08F220-24; C08F232-00; G03F007-033; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 811437-12-4 811437-13-5 811437-14-6 811437-16-8

811437-18-0 811437-20-4 811437-21-5

811437-22-6 811437-23-7

(pos. photoresist comps. containing  
fluoroalkyl-containing acrylate polymers with good vacuum UV  
sensitivity and alkali developability)

L18 ANSWER 25 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1081976 HCAPLUS

DOCUMENT NUMBER: 142:65312

TITLE: Positive resist composition

INVENTOR(S): Fujimori, Toru

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: U.S. Pat. Appl. Publ., 58 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004253538	A1	20041216	US 2004-867634	2004 0616
JP 2005010217	A2	20050113	JP 2003-171063	2003 0616
PRIORITY APPLN. INFO.:			JP 2003-171063	A 2003 0616

AB A pos. resist composition comprises (A) a compound that generates an acid upon irradiation of an actinic ray or radiation, (B) a resin that is insol. or hardly soluble in an alkali developing solution but becomes soluble in the alkali developing solution by the action of an acid, and (C) a compound having at least one group that is decomposed with an acid to generate a carboxylic acid and at least three groups selected from hydroxy group and substituted hydroxy group.

IT 809286-37-1P

(pos. resist composition containing)

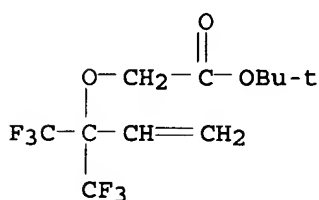
RN 809286-37-1 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-2-propenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 809286-36-0

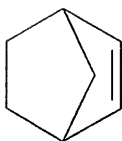
CMF C11 H14 F6 O3



CM 2

CRN 498-66-8

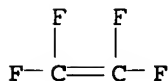
CMF C7 H10



CM 3



CRN 116-14-3  
CMF C2 F4



IC ICM G03C001-76  
INCL 430270100  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
IT 109-92-2DP, Ethyl vinyl ether, reaction product with polyhydroxystyrene 24979-70-2DP, VP-15000, reaction product with Et vinyl ether 250378-10-0P 365568-64-5P, tert-Butyl ester of norbornene-2-carboxylic acid-tetrafluoroethylene copolymer  
391232-36-3P 398140-38-0P 398140-57-3P 398140-71-1P  
398140-77-7P 398140-88-0P 398140-91-5P 405509-20-8P  
430436-79-6P 430437-14-2P 482609-97-2P 608140-58-5P  
809286-37-1P 810666-23-0P  
(pos. resist composition containing)

L18 ANSWER 26 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:935362 HCAPLUS  
DOCUMENT NUMBER: 141:403484  
TITLE: The chemically amplified photoresist composition and the pattern formation method  
INVENTOR(S): Kanna, Shinichi; Takahashi, Omote  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 86 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004310007	A2	20041104	JP 2003-298909	2003 0822
PRIORITY APPLN. INFO.:			JP 2003-85456	A 2003 0326

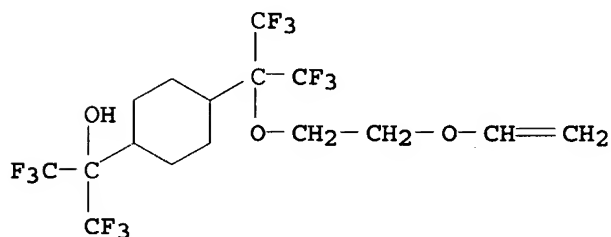
OTHER SOURCE(S): MARPAT 141:403484  
AB The disclosed photoacid generation type resist composition comprises (1) F-containing resin whose solubility in alkaline developer increases greatly in the presence of an acid; (2) photoacid generating compound, (3) a specified amphoteric substance, and (4) a solvent. Patterning process which uses the resist composition and F2 excimer laser is also disclosed. The resist composition has good coatibility, development characteristics, and etching resistance.  
IT 786702-64-5P  
(photoresist compns. containing photoacid generator and)  
RN 786702-64-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 4-[1-[2-(ethenyloxy)ethoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol and 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 654076-29-6

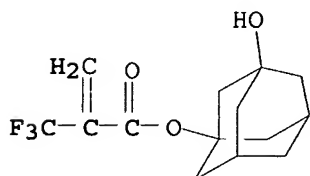
CMF C16 H18 F12 O3



CM 2

CRN 521913-15-5

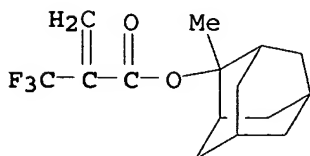
CMF C14 H17 F3 O3



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

## Section cross-reference(s) : 35

IT 611209-36-0P 672937-76-7P 672937-79-0P 679804-77-4P  
 731861-92-0P 731861-93-1P 766547-22-2P 766547-24-4P  
 786702-64-5P

(photoresist compns. containing **photoacid** generator and)

L18 ANSWER 27 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:904407 HCAPLUS

DOCUMENT NUMBER: 141:386381

TITLE: Positive-working resist composition containing alkali-soluble resins and photoacids

INVENTOR(S): Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 71 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2004302200	A2	20041028	JP 2003-95806	2003 0331
			JP 2003-95806	2003 0331

PRIORITY APPLN. INFO.:

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT  
 \*

AB Disclosed is the pos.-working resist composition comprising (A) a resin which has  $\geq 1$  repeating unit represented by I and  $\geq 1$  repeating unit represented by II (Ra-c = H, F, fluoroalkyl; L1 = single bond, divalent bond; X = H, acid-decomposable group; n = 0, 1; Q = H, OH; Z = O, S, etc.; and Z' = O, S, etc.) and increases its solubility to an alkali developer upon the interaction with an acid and (B) a photoacid. The composition exhibited sufficient optical transparency at 157 nm.

IT 782501-29-5P

(pos.-working resist composition containing alkali-soluble resin and **photoacid**)

RN 782501-29-5 HCAPLUS

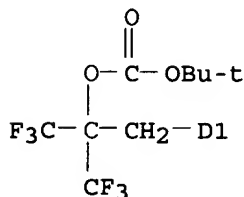
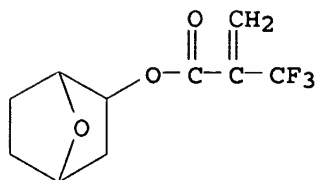
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5(or 6)-[2-[[[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]-7-oxabicyclo[2.2.1]hept-2-yl ester, polymer with  $\alpha, \alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 782501-28-4

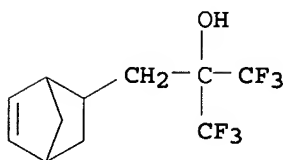
CMF C19 H21 F9 O6

CCI IDS



CM 2

CRN 196314-61-1  
CMF C11 H12 F6 O



IC ICM G03F007-039  
ICS C08F016-26; C08F020-26; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
IT 782501-29-5P 782501-31-9P  
(pos.-working resist composition containing alkali-soluble resin and photoacid)

L18 ANSWER 28 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:904405 HCAPLUS

DOCUMENT NUMBER: 141:386379

TITLE: Positive-working resist composition containing alkali-soluble resins and photoacids

INVENTOR(S): Mizutani, Kazuyoshi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 74 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

USHA SHRESTHA EIC 1700 REM 4B28

JP 2004302197

A2

20041028

JP 2003-95803

2003  
0331

PRIORITY APPLN. INFO.:

JP 2003-95803

2003  
0331

AB Disclosed is the pos.-working resist composition comprising (A) a resin having F or trifluoromethyl in the backbone chain and also having -COQ(CR1aR2aR3a)(R4aR5aR6a) (R1a-6a = F, H, alkyl; and Q = acid-decomposable group) and -COOQ' (Q' = acid-decomposable group) and (B) a photoacid.

IT 782491-58-1P 782502-60-7P 782502-62-9P

(pos.-working resist composition containing alkali-soluble resin and photoacid)

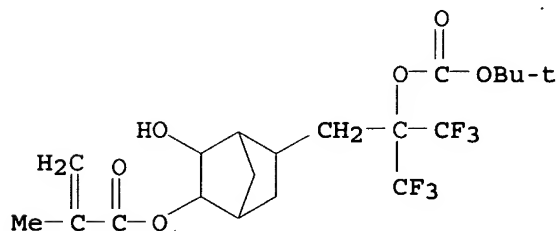
RN 782491-58-1 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 5-[2-[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]-3-hydroxybicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 782491-57-0

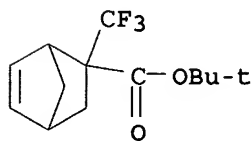
CMF C20 H26 F6 O6



CM 2

CRN 365568-55-4

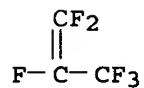
CMF C13 H17 F3 O2



CM 3

CRN 116-15-4

CMF C3 F6



RN 782502-60-7 HCAPLUS

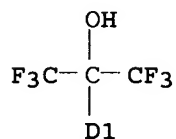
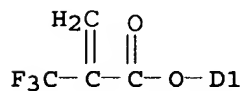
CN 2-Propenoic acid, 2-(trifluoromethyl)-, [2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl ester, polymer with 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl carbonate and 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 782502-59-4

CMF C13 H13 F9 O3

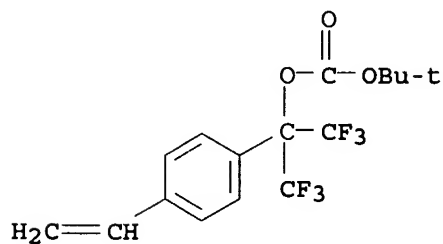
CCI IDS



CM 2

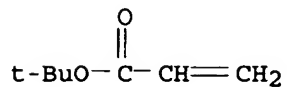
CRN 143336-93-0

CMF C16 H16 F6 O3



CM 3

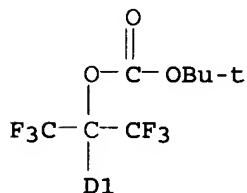
CRN 1663-39-4  
CMF C7 H12 O2



RN 782502-62-9 HCAPLUS  
CN 2-Propenoic acid, 2-fluoro-, 1,1-dimethylethyl ester, polymer with  
1,1-dimethylethyl 1-[(ethenyloxy)cyclohexyl]-2,2,2-trifluoro-1-  
(trifluoromethyl)ethyl carbonate and 4-ethenyl- $\alpha,\alpha$ -  
bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

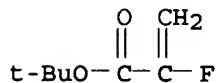
CM 1

CRN 782502-61-8  
CMF C16 H22 F6 O4  
CCI IDS



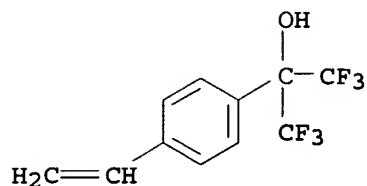
CM 2

CRN 85345-86-4  
CMF C7 H11 F O2



CM 3

CRN 2386-82-5  
CMF C11 H8 F6 O

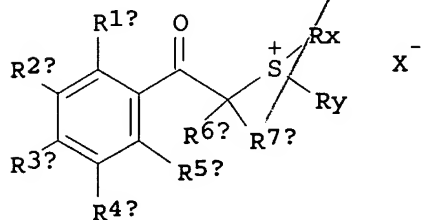


IC ICM G03F007-039  
ICS H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
IT 782491-55-8P 782491-56-9P 782491-58-1P  
782502-60-7P 782502-62-9P  
(pos.-working resist composition containing alkali-soluble resin and photoacid)

L18 ANSWER 29 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:904404 HCAPLUS  
DOCUMENT NUMBER: 141:386378  
TITLE: Positive-working resist composition containing alkali soluble resins and photoacids  
INVENTOR(S): Sasaki, Tomoya  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 93 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004302189	A2	20041028	JP 2003-95605	2003 0331
PRIORITY APPLN. INFO.:				JP 2003-95605
				2003 0331

OTHER SOURCE(S): MARPAT 141:386378  
GI



I

AB Disclosed is the pos.-working resist composition comprising (a) a resin



increasing its solubility to an alkali developer upon an interaction with an acid and (b) a photoacid, wherein the resin (a) contains  $\geq 1$  repeating unit having  $\geq 1$  group represented by  $-C(OR)(CR_5OR_5R_5)(CR_5R_5R_5)$  ( $T_{50-55} = H, F, \text{alkyl}$ ; and  $R = H, \text{acid decomposable or nondecomposable group}$ ) and the photoacid (b) is represented by  $R_1bR_2bR_3bS^+ X^-$  ( $R_1b-3b = \text{organic group free of aromatic ring}$ ;  $X^- = \text{sulfonic acid, carboxylic acid, sulfonylimide}$ ) or  $I$  ( $R_{1c}-5c = H, \text{alkyl, alkoxy, etc.}$ ;  $R_{6c}-7c = H, \text{alkyl, aryl}$ ;  $R_x, R_y = \text{alkyl, 2-oxoalkyl, etc.}$ ). The composition was suitable for a light source having a wavelength  $\leq 160 \text{ nm}$ .

IT 782482-74-0P 782482-76-2P 782482-78-4P

782482-79-5P 782482-82-0P 782482-84-2P

782482-85-3P 782482-88-6P 782482-91-1P

(pos.-working resist composition containing alkali soluble resin and photoacid)

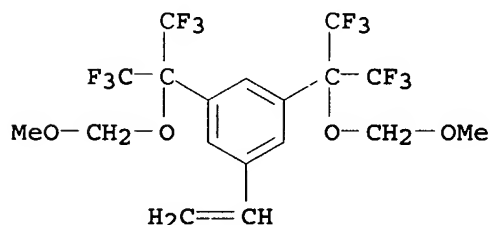
RN 782482-74-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, methyl ester, polymer with  $\alpha, \alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-59-7

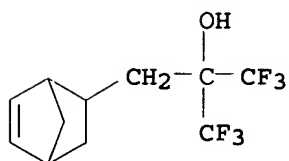
CMF C18 H16 F12 O4



CM 2

CRN 196314-61-1

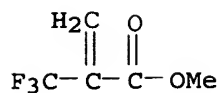
CMF C11 H12 F6 O



CM 3

CRN 382-90-1

CMF C5 H5 F3 O2



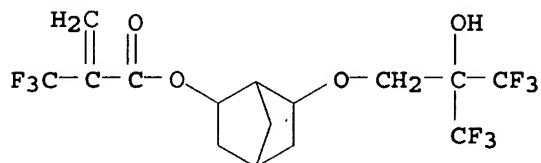
RN 782482-76-2 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 6-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propoxy]bicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 782482-75-1

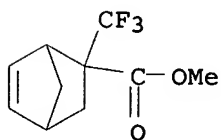
CMF C15 H15 F9 O4



CM 2

CRN 597581-42-5

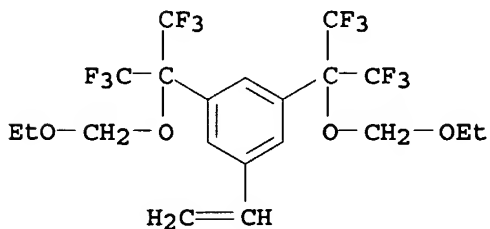
CMF C10 H11 F3 O2



CM 3

CRN 585573-40-6

CMF C20 H20 F12 O4



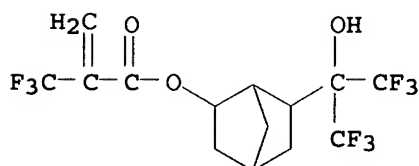
RN 782482-78-4 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene and 6-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]bicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 732299-59-1

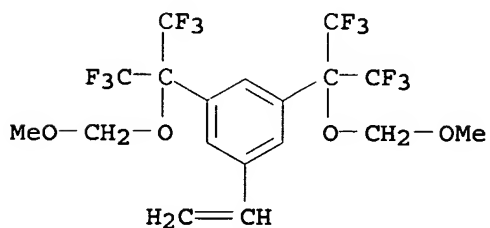
CMF C14 H13 F9 O3



CM 2

CRN 585573-59-7

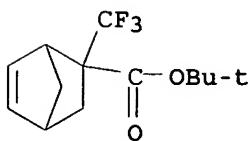
CMF C18 H16 F12 O4



CM 3

CRN 365568-55-4

CMF C13 H17 F3 O2



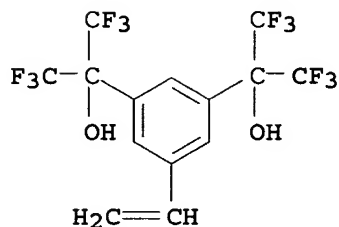
RN 782482-79-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

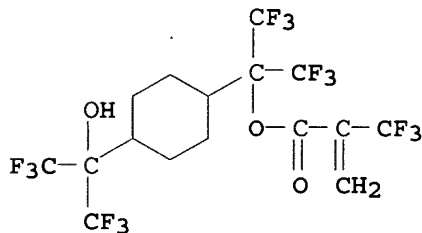
CMF C14 H8 F12 O2



CM 2

CRN 479072-83-8

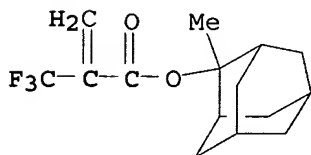
CMF C16 H13 F15 O3



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



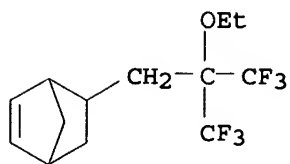
RN 782482-82-0 HCAPLUS

CN Benzenemethanol, 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-[(2-methoxyethoxy)methoxy]-1-(trifluoromethyl)ethyl]benzene and 5-[2-ethoxy-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 782482-81-9

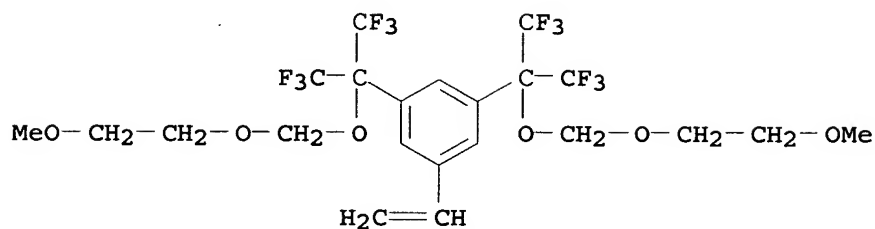
CMF C13 H16 F6 O



CM 2

CRN 756532-35-1

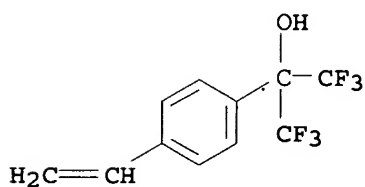
CMF C22 H24 F12 O6



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



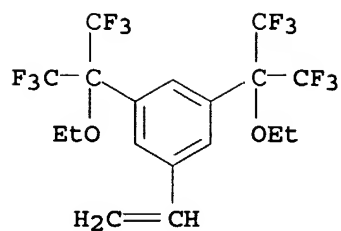
RN 782482-84-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with 1-ethenyl-3,5-bis[1-ethoxy-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene, 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-[(2-methoxyethoxy)methoxy]-1-(trifluoromethyl)ethyl]benzene and 5-[2-ethoxy-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 782482-83-1

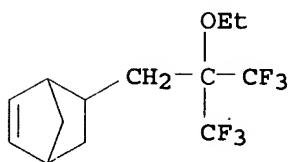
CMF C18 H16 F12 O2



CM 2

CRN 782482-81-9

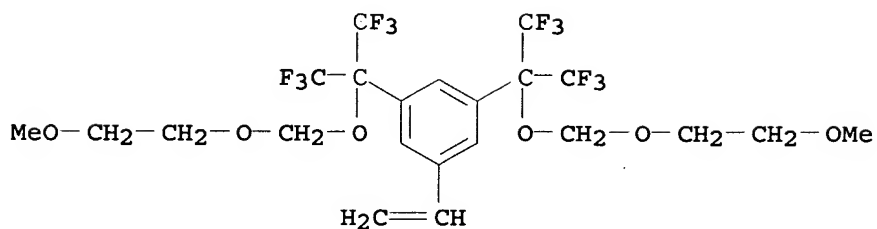
CMF C13 H16 F6 O



CM 3

CRN 756532-35-1

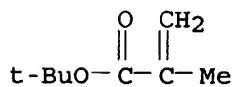
CMF C22 H24 F12 O6



CM 4

CRN 585-07-9

CMF C8 H14 O2



RN 782482-85-3 HCAPLUS

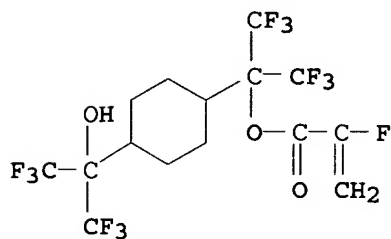
CN 2-Propenoic acid, 2-fluoro-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and

1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 635683-21-5

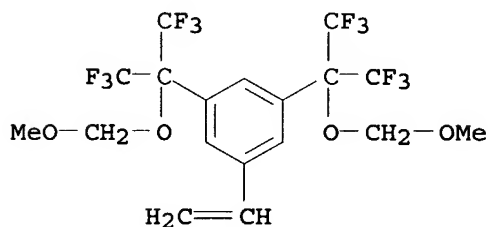
CMF C15 H13 F13 O3



CM 2

CRN 585573-59-7

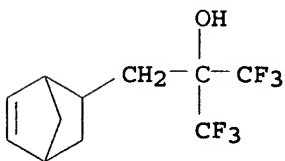
CMF C18 H16 F12 O4



CM 3

CRN 196314-61-1

CMF C11 H12 F6 O



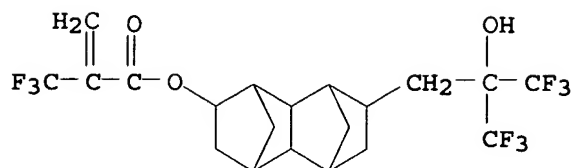
RN 782482-88-6 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, decahydro[7-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]-1,4:5,8-dimethanonaphthalen-2-yl] ester, polymer with 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-(trifluoromethyl)-2-propenoate and  $\alpha, \alpha', \alpha', \alpha'$ -tetrakis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2,3-diethanol (9CI) (CA INDEX NAME)

CM 1

CRN 782482-87-5

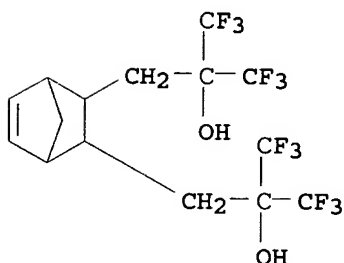
CMF C20 H21 F9 O3



CM 2

CRN 782482-86-4

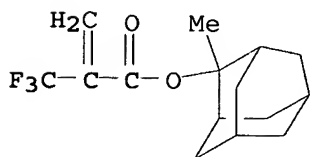
CMF C15 H14 F12 O2



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



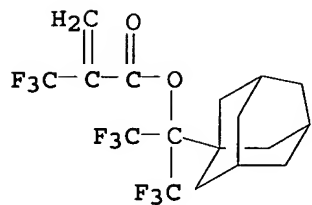
RN 782482-91-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-tricyclo[3.3.1.1.3]dec-1-yl-1-(trifluoromethyl)ethyl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-cyclohexanedimethanol (9CI) (CA INDEX NAME)

CM 1

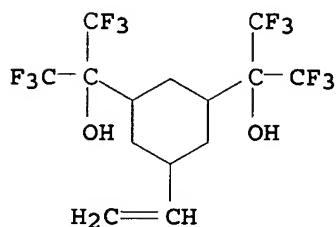


CRN 782482-90-0  
CMF C17 H17 F9 O2



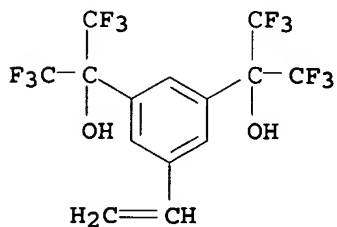
CM 2

CRN 669768-43-8  
CMF C14 H14 F12 O2



CM 3

CRN 568587-26-8  
CMF C14 H8 F12 O2



IC ICM G03F007-039  
ICS G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 35, 38  
IT 782482-74-0P 782482-76-2P 782482-78-4P  
782482-79-5P 782482-82-0P 782482-84-2P  
782482-85-3P 782482-88-6P 782482-91-1P  
(pos.-working resist composition containing alkali soluble resin and  
photoacid)

L18 ANSWER 30 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:823503 HCAPLUS

DOCUMENT NUMBER: 141:322583  
 TITLE: Positive resist composition  
 INVENTOR(S): Fujimori, Toru  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 49 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004279805	A2	20041007	JP 2003-72035	2003 0317
PRIORITY APPLN. INFO.:			JP 2003-72035	2003 0317

AB Title resist composition suitable for F2 excimer laser exposure comprises (A) fluoropolymers which decomp. and becomes more soluble in alkali developer liquid in the presence of acids, (B) actinic ray-sensitive acid generators, and (C) basic oxygen-containing amines.

IT 769193-81-9 769193-82-0 769193-83-1  
 769193-84-2 769195-17-7 769195-18-8

(pos. resist composition containing fluoropolymers and oxygen-containing amines)

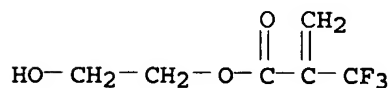
RN 769193-81-9 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-hydroxyethyl ester, polymer with bicyclo[2.2.1]hept-5-ene-2,3-dimethanol, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 450358-94-8

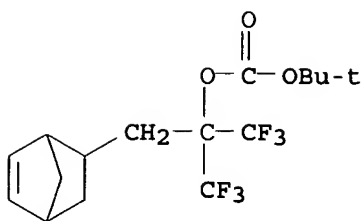
CMF 06 H7 F3 O3



CM 2

CRN 196314-63-3

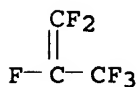
CMF C16 H20 F6 O3



CM 3

CRN 116-15-4

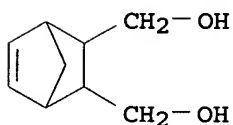
CMF C3 F6



CM 4

CRN 85-39-2

CMF C9 H14 O2



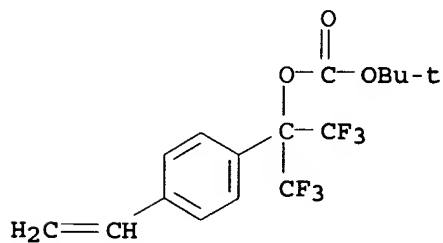
RN 769193-82-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

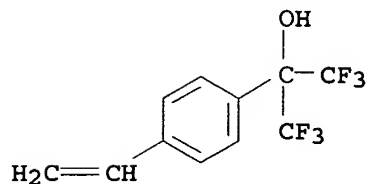
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

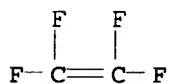
CMF C11 H8 F6 O



CM 3

CRN 116-14-3

CMF C2 F4



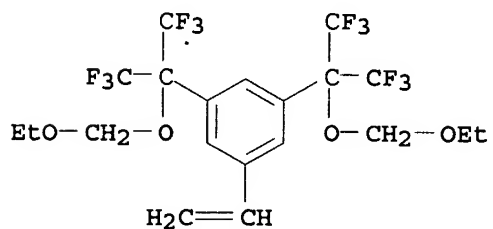
RN 769193-83-1 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -  
 tetrakis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[1-  
 (ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene  
 and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-40-6

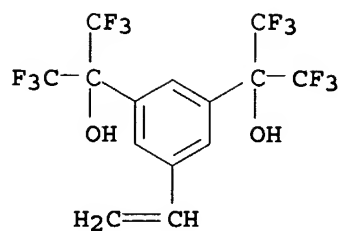
CMF C20 H20 F12 O4



CM 2

CRN 568587-26-8

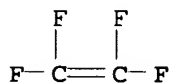
CMF C14 H8 F12 O2



CM 3

CRN 116-14-3

CMF C2 F4



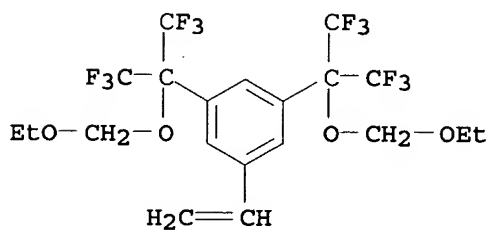
RN 769193-84-2 HCAPLUS

CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -  
 tetrakis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene  
 and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-40-6

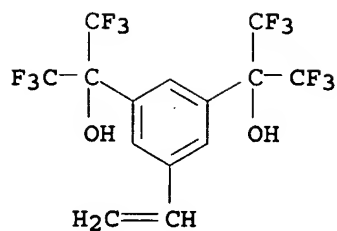
CMF C20 H20 F12 O4



CM 2

CRN 568587-26-8

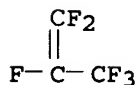
CMF C14 H8 F12 O2



CM 3

CRN 116-15-4

CMF C3 F6



RN 769195-17-7 HCAPLUS

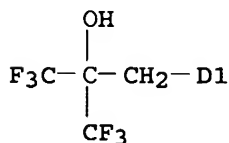
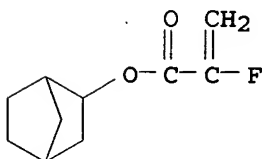
CN 2-Propenoic acid, 2-fluoro-, 5(or 6)-[2-[[[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, tetrafluoroethene and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 769195-16-6

CMF C14 H15 F7 O3

CCI IDS

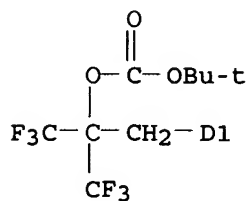
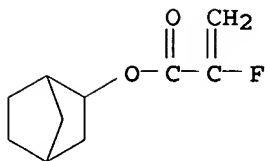


CM 2

CRN 769195-15-5

CMF C19 H23 F7 O5

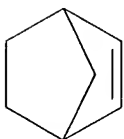
CCI IDS



CM 3

CRN 498-66-8

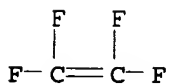
CMF C7 H10



CM 4

CRN 116-14-3

CMF C2 F4



RN 769195-18-8 HCAPLUS

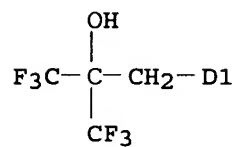
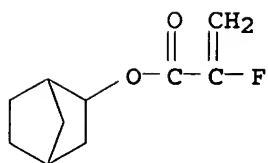
CN 2-Propenoic acid, 2-fluoro-, 5(or 6)-[2-[[[(1,1-dimethylethoxy)carbonyl]oxy]-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol, 1,1,2,3,3,3-hexafluoro-1-propene and 5(or 6)-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-yl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 769195-16-6

CMF C14 H15 F7 O3

CCI IDS

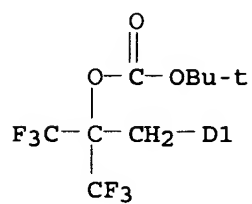
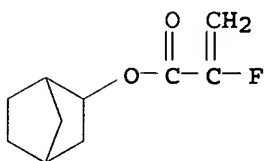


CM 2

CRN 769195-15-5

CMF C19 H23 F7 O5

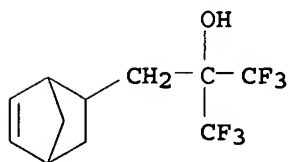
CCI IDS



CM 3

CRN 196314-61-1

CMF C11 H12 F6 O

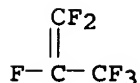




CM 4

CRN 116-15-4

CMF C3 F6



IC ICM G03F007-039  
ICS G03F007-004; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 818-61-1D, 2-Hydroxyethyl acrylate, polymers 1663-39-4D, tert-Butyl acrylate, polymers 262617-13-0 735307-84-3  
769193-79-5 769193-80-8 769193-81-9  
769193-82-0 769193-83-1 769193-84-2  
769193-85-3 769193-86-4 769193-87-5 769193-88-6  
769193-89-7 769195-17-7 769195-18-8  
(pos. resist composition containing fluoropolymers and oxygen-containing amines)

L18 ANSWER 31 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:801603 HCAPLUS

DOCUMENT NUMBER: 141:304291

TITLE: Positive photoresist compositions showing high transparency to 157-nm F2 excimer lasers and forming patterns with small line-edge roughness and less scums

INVENTOR(S): Kanda, Hiromi; Mizutani, Kazuyoshi; Kanna, Shinichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 68 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004271630	A2	20040930	JP 2003-58733	2003 0305
PRIORITY APPLN. INFO.				2003 0305

AB The compns. comprise (A) resins having (A1) [R1R2CCR3(OR4)] units [R1-R3 = H, (fluoro)alkyl, F; R4 = H, (fluoro)alkyl, L1X; X = polar group, alkaline developer-soluble group, group solubilized in alkaline developers by acids; L1 = single bond, divalent linking group] and (A2) [R5R6CCR7(CONR8R9)] units [R5-R7 = same as R1; R8, R9 = H, (fluoro)alkyl, L2Y; Y = same as X; L2 = same as L1] and (B) compds. generating acids by (actinic ray) radiation.

IT 762301-14-4P

(pos. photoresist compns. showing high

transparency to F2 excimer lasers and forming patterns with small line-edge roughness and less scums)

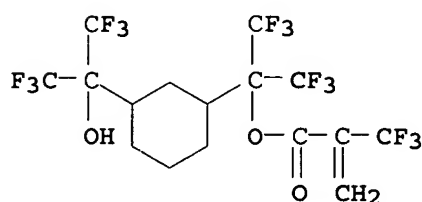
RN 762301-14-4 HCAPLUS

CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 6-(ethenyloxy)-2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 4-[1-oxo-2-(trifluoromethyl)-2-propenyl]morpholine and 2,2,2-trifluoro-1-[3-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 669006-26-2

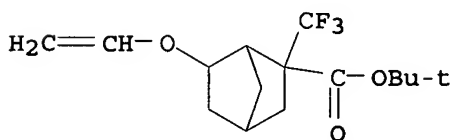
CMF C16 H13 F15 O3



CM 2

CRN 634920-64-2

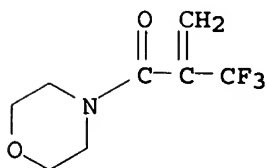
CMF C15 H21 F3 O3



CM 3

CRN 230296-45-4

CMF C8 H10 F3 N O2



IC ICM G03F007-039

ICS C08F216-12; C08F220-54; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 762301-13-3P 762301-14-4P

(pos. photoresist compns. showing high

transparency to F2 excimer lasers and forming patterns with small line-edge roughness and less scums)

L18 ANSWER 32 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:798826 HCAPLUS  
 DOCUMENT NUMBER: 141:322564  
 TITLE: Positive resist composition  
 INVENTOR(S): Kanna, Shinichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 87 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004272102	A2	20040930	JP 2003-65452	2003 0311
PRIORITY APPLN. INFO.:			JP 2003-65452	2003 0311

OTHER SOURCE(S): MARPAT 141:322564

AB The invention provides a pos. resist composition suitable for F2 excimer laser light, having good coatability, sensitivity, and reduced image defects. The composition comprises (A) fluoropolymers which decompose and have increased solubility in the presence of acids, (B) acid generators active to actinic rays or radiation, (C) ammonium salts which do not decompose under radiation, and (D) solvents.

IT 585573-50-8P 677354-71-1P 765954-80-1P

(pos. resist composition containing fluoropolymers)

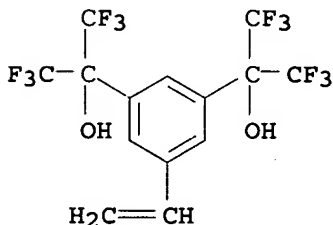
RN 585573-50-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

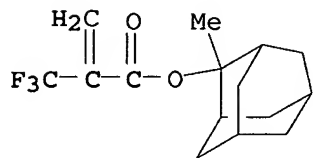
CMF C14 H8 F12 O2



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



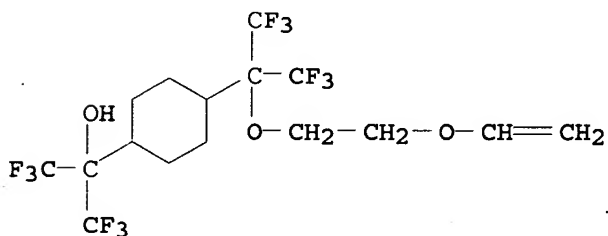
RN 677354-71-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 4-[1-[2-(ethenyloxy)ethoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol and 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 654076-29-6

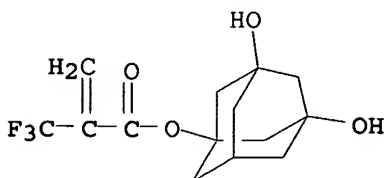
CMF C16 H18 F12 O3



CM 2

CRN 521913-16-6

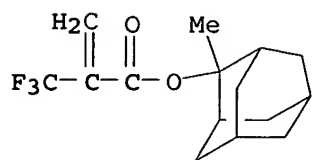
CMF C14 H17 F3 O4



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



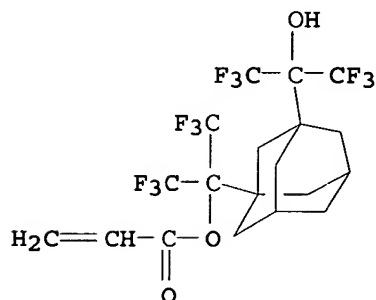
RN 765954-80-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester,  
polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 2,2,2-trifluoro-1-[3-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl]-1-(trifluoromethyl)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 765954-79-8

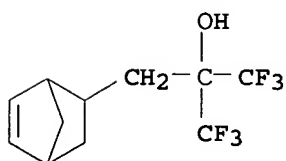
CMF C19 H18 F12 O3



CM 2

CRN 196314-61-1

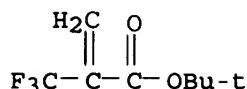
CMF C11 H12 F6 O



CM 3

CRN 105935-24-8

CMF C8 H11 F3 O2



IC ICM G03F007-004  
 ICS C08F012-20; C08F020-26; G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 585573-50-8P 611209-36-0P 677354-71-1P  
 679804-77-4P 765954-80-1P 766547-22-2P 766547-24-4P  
 (pos. resist composition containing fluoropolymers)

L18 ANSWER 33 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:796420 HCAPLUS  
 DOCUMENT NUMBER: 141:304288  
 TITLE: Positive resist composition and method of forming resist pattern using the same  
 INVENTOR(S): Kodama, Kunihiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 46 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1462858	A1	20040929	EP 2004-6536	2004 0318
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
JP 2004287262	A2	20041014	JP 2003-81260	2003 0324
US 2004197708	A1	20041007	US 2004-806451	2004 0323

PRIORITY APPLN. INFO.: JP 2003-81260 A 2003 0324

OTHER SOURCE(S): MARPAT 141:304288

AB A pos. resist composition comprising: (A) a fluorine atom-containing resin, wherein the resin comprises at least one group that increases a solubility of the resin in an alkali developer by the action of an acid; and (B) a sulfonium salt compound having a cation moiety, wherein the cation moiety contains at least one hydroxy group, and the sulfonium salt compound generates an acid upon irradiation with one of an actinic ray and a radiation.

IT 370102-83-3 585573-50-8 677354-71-1  
 (pos. resist composition from fluoropolymer and sulfonium salt photoacid)

RN 370102-83-3 HCAPLUS

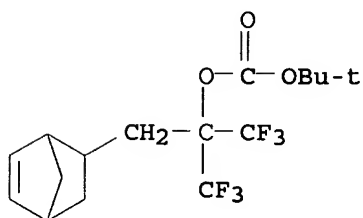
CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-

trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester,  
polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

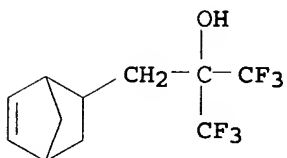
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



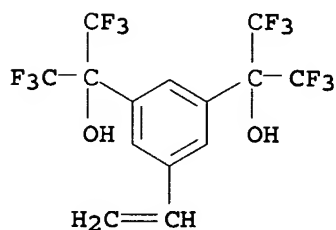
RN 585573-50-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

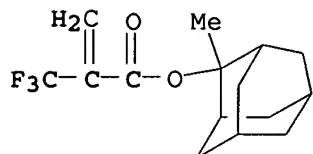
CRN 568587-26-8

CMF C14 H8 F12 O2



CM 2

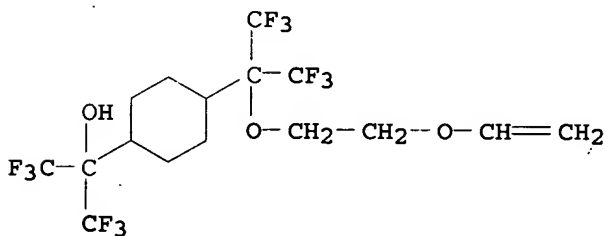
CRN 188739-86-8  
CMF C15 H19 F3 O2



RN 677354-71-1 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.3,7]dec-1-yl ester, polymer with 4-[1-[2-(ethenyloxy)ethoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]-α,α-bis(trifluoromethyl)cyclohexanemethanol and 2-methyltricyclo[3.3.1.3,7]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

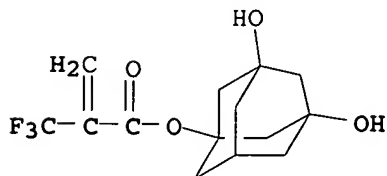
CM 1

CRN 654076-29-6  
CMF C16 H18 F12 O3



CM 2

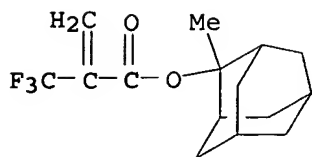
CRN 521913-16-6  
CMF C14 H17 F3 O4



CM 3

CRN 188739-86-8  
CMF C15 H19 F3 O2





IC ICM G03F007-004  
ICS G03F007-039  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38  
IT 134993-70-7 240424-21-9 279218-75-6 367522-51-8  
370102-83-3 524699-48-7 524699-56-7 524699-58-9  
524699-59-0 524699-60-3 524699-61-4 585573-40-6  
585573-50-8 607710-65-6 607710-74-7 669768-43-8  
677354-71-1 732299-47-7 762274-01-1 762275-99-0  
764717-19-3 764717-20-6 764717-21-7 764717-22-8  
764717-23-9 764717-25-1 764717-26-2 764717-28-4  
764717-29-5 764717-30-8 764717-32-0  
(pos. resist composition from fluoropolymer and sulfonium salt photoacid)

L18 ANSWER 34 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:753223 HCAPLUS  
DOCUMENT NUMBER: 141:268557  
TITLE: Positive resist composition and method of forming a resist pattern using the same  
INVENTOR(S): Sasaki, Tomoya  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 80 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1457819	A2	20040915	EP 2004-4961	2004 0303
EP 1457819	A3	20050622		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
JP 2004279471	A2	20041007	JP 2003-67010	2003 0312
PRIORITY APPLN. INFO.:			JP 2003-67010	A 2003 0312

AB A pos. photoresist composition comprises (A) a resin comprising specific repeating units and coming to have enhanced solubility in an alkaline developing solution by the action of an acid and (B) a compound

generating an acid by the action of actinic rays or a radiation.

IT 756532-32-8P 756532-34-0P 756532-37-3P  
 756532-38-4P 756532-39-5P 756532-40-8P  
 756532-41-9P 756532-42-0P 756532-44-2P  
 756532-45-3P 756532-47-5P 756532-48-6P  
 756532-50-0P

(pos. photoresist composition for forming resist pattern)

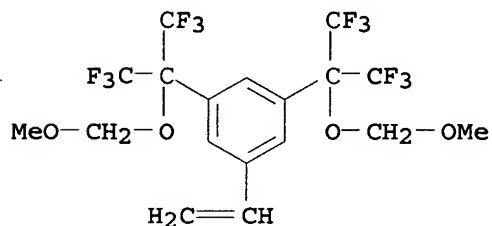
RN 756532-32-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-59-7

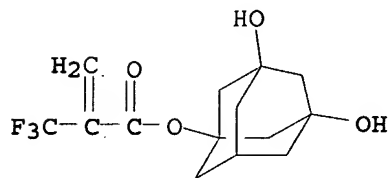
CMF C18 H16 F12 O4



CM 2

CRN 521913-16-6

CMF C14 H17 F3 O4



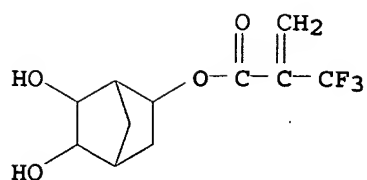
RN 756532-34-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5,6-dihydroxybicyclo[2.2.1]hept-2-yl ester, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 756532-33-9

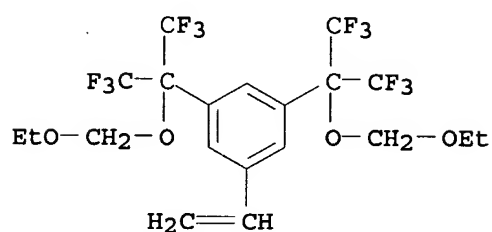
CMF C11 H13 F3 O4



CM 2

CRN 585573-40-6

CMF C20 H20 F12 O4



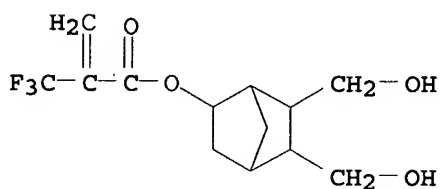
RN 756532-37-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5,6-bis(hydroxymethyl)bicyclo[2.2.1]hept-2-yl ester, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-[(2-methoxyethoxy)methoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 756532-36-2

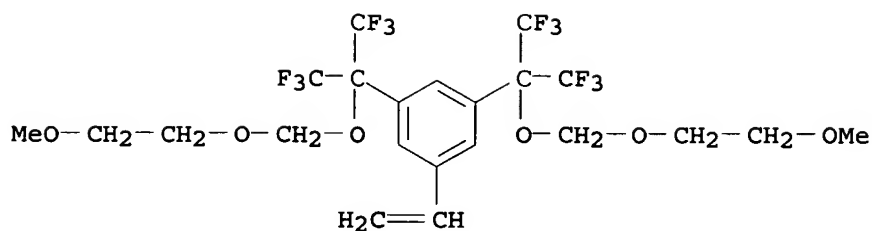
CMF C13 H17 F3 O4



CM 2

CRN 756532-35-1

CMF C22 H24 F12 O6



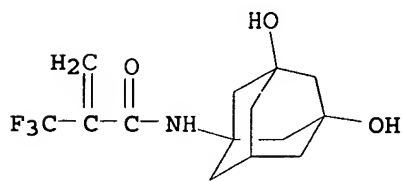
RN 756532-38-4 HCAPLUS

CN 2-Propenamide, N-(3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl)-2-(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 677354-83-5

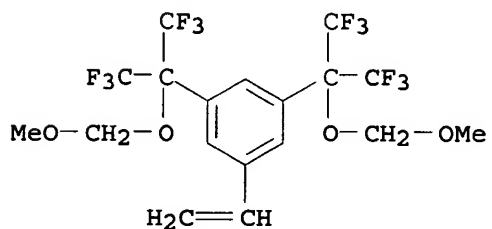
CMF C14 H18 F3 N O3



CM 2

CRN 585573-59-7

CMF C18 H16 F12 O4



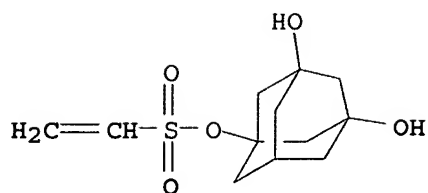
RN 756532-39-5 HCAPLUS

CN Ethenesulfonic acid, 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 677354-87-9

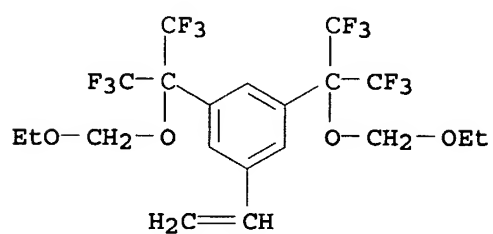
CMF C12 H18 O5 S



CM 2

CRN 585573-40-6

CMF C20 H20 F12 O4



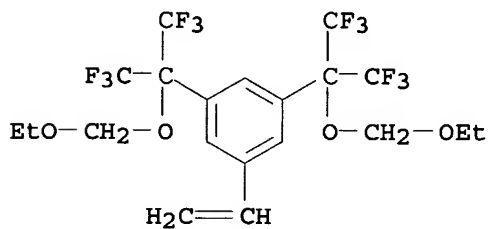
RN 756532-40-8 HCAPLUS

CN Benzenemethanol, 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)-, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-40-6

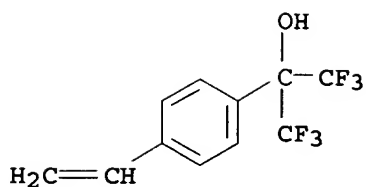
CMF C20 H20 F12 O4



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



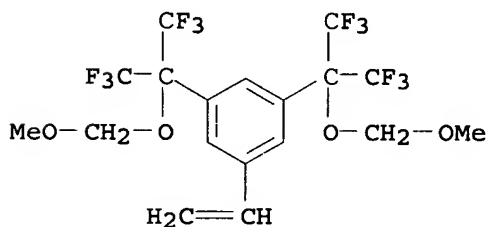
RN 756532-41-9 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 585573-59-7

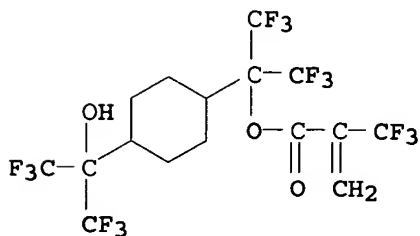
CMF C18 H16 F12 O4



CM 2

CRN 479072-83-8

CMF C16 H13 F15 O3

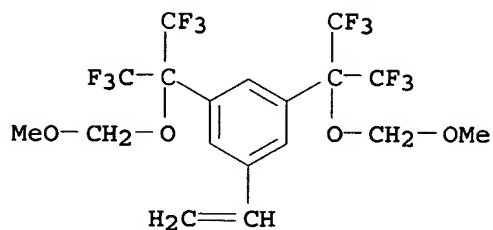


RN 756532-42-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1,1-dimethylethyl 2-(trifluoromethyl)-2-propenoate and 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

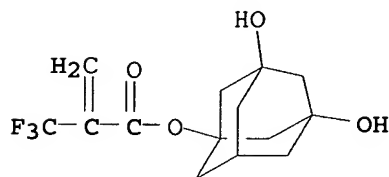
CM 1

CRN 585573-59-7  
CMF C18 H16 F12 O4



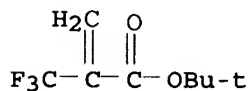
CM 2

CRN 521913-16-6  
CMF C14 H17 F3 O4



CM 3

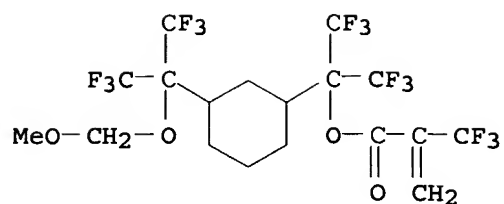
CRN 105935-24-8  
CMF C8 H11 F3 O2



RN 756532-44-2 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5,6-bis(hydroxymethyl)bicyclo[2.2.1]hept-2-yl ester, polymer with 1-ethenyl-3,5-bis[2,2,2-trifluoro-1-[(2-methoxyethoxy)methoxy]-1-(trifluoromethyl)ethyl]benzene and 2,2,2-trifluoro-1-[3-[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

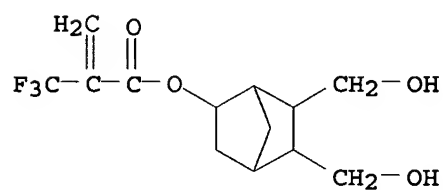
CRN 756532-43-1  
CMF C18 H17 F15 O4



CM 2

CRN 756532-36-2

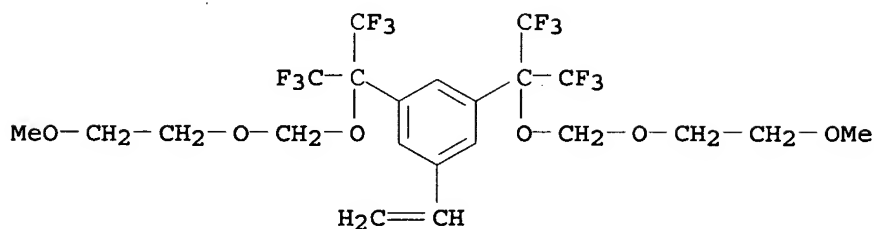
CMF C13 H17 F3 O4



CM 3

CRN 756532-35-1

CMF C22 H24 F12 O6



RN 756532-45-3 HCAPLUS

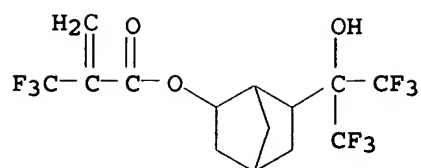
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 6-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]bicyclo[2.2.1]hept-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 732299-59-1

CMF C14 H13 F9 O3

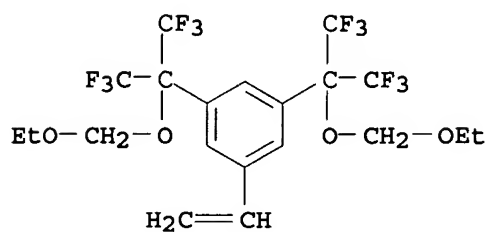




CM 2

CRN 585573-40-6

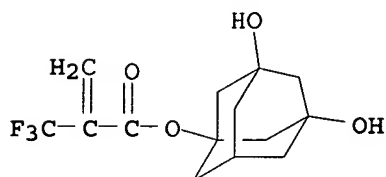
CMF C20 H20 F12 O4



CM 3

CRN 521913-16-6

CMF C14 H17 F3 O4



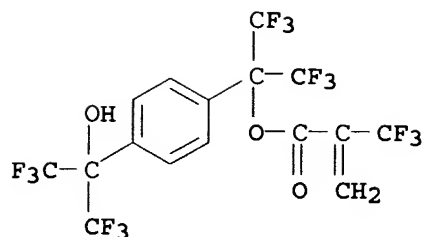
RN 756532-47-5 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 3,5-dihydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]phenyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 756532-46-4

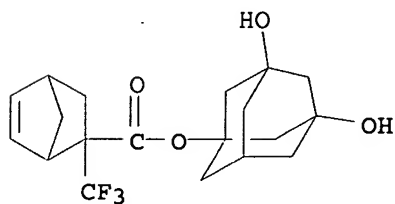
CMF C16 H7 F15 O3



CM 2

CRN 731861-90-8

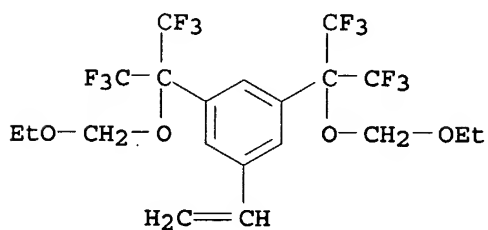
CMF C19 H23 F3 O4



CM 3

CRN 585573-40-6

CMF C20 H20 F12 O4



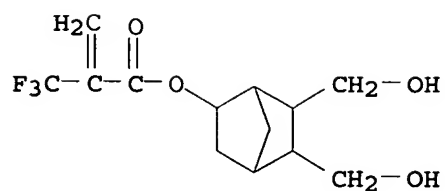
RN 756532-48-6 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5,6-bis(hydroxymethyl)bicyclo[2.2.1]hept-2-yl ester, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 756532-36-2

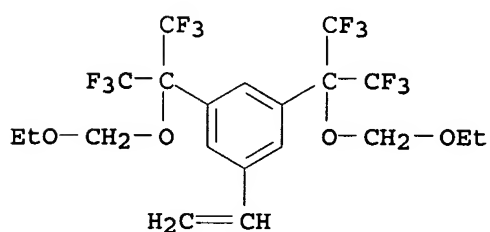
CMF C13 H17 F3 O4



CM 2

CRN 585573-40-6

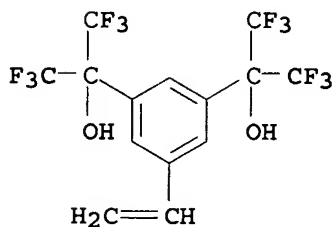
CMF C20 H20 F12 O4



CM 3

CRN 568587-26-8

CMF C14 H8 F12 O2



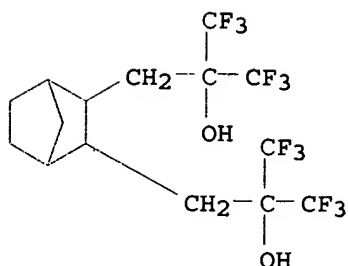
RN 756532-50-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 5,6-bis(hydroxymethyl)bicyclo[2.2.1]hept-2-yl ester, polymer with 1,1-dimethylethyl 2-(trifluoromethyl)-2-propenoate and  $\alpha, \alpha, \alpha', \alpha'$ -tetrakis(trifluoromethyl)bicyclo[2.2.1]heptane-2,3-diethanol (9CI) (CA INDEX NAME)

CM 1

CRN 756532-49-7

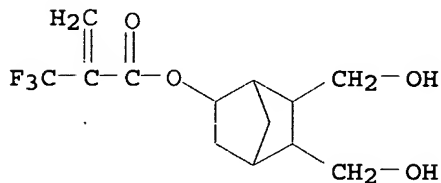
CMF C15 H16 F12 O2



CM 2

CRN 756532-36-2

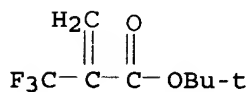
CMF C13 H17 F3 O4



CM 3

CRN 105935-24-8

CMF C8 H11 F3 O2



IC ICM G03F007-004

ICS G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 756532-32-8P 756532-34-0P 756532-37-3P

756532-38-4P 756532-39-5P 756532-40-8P

756532-41-9P 756532-42-0P 756532-44-2P

756532-45-3P 756532-47-5P 756532-48-6P

756532-50-0P

(pos. photoresist composition for forming resist pattern)

L18 ANSWER 35 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:716375 HCAPLUS

DOCUMENT NUMBER: 141:233205

TITLE: Positive resist composition with wide exposure latitude

INVENTOR(S): Fujimori, Toru

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 76 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004246276	A2	20040902	JP 2003-38527	2003 0217

PRIORITY APPLN. INFO.: JP 2003-38527  
 2003  
 0217

AB Title composition comprises (A) a radiation-active acid generator, (B) a resin component which is insol. or poorly soluble in alkali developing liquid, but becomes soluble in the presence of an acid, and (C) a compound reactive to acid group and forming chemical bond in the presence of an acid.

IT 430436-81-0P  
 (pos. resist composition with wide exposure latitude)

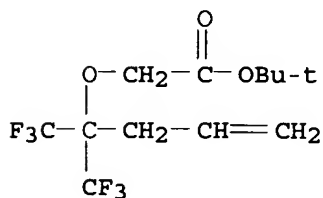
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

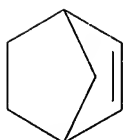
CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

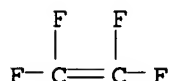
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



IC ICM G03F007-004

ICS G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 64-19-7DP, Acetic acid, reaction products with p-hydroxystyrene homopolymer reaction products 109-53-5DP, reaction products with p-hydroxystyrene homopolymer 109-92-2DP, Ethyl vinyl ether, reaction products with p-hydroxystyrene homopolymer 935-04-6DP, Vinyl benzyl ether, reaction products with p-hydroxystyrene homopolymer 24979-70-2DP, p-Hydroxystyrene homopolymer, reaction products with vinyl ethers 103983-46-6DP, reaction products with p-hydroxystyrene homopolymer 212555-24-3DP, reaction products with p-hydroxystyrene homopolymer 250378-10-0P 262617-13-0P 391232-36-3P 398140-38-0P 398140-57-3P 398140-71-1P 398140-77-7P 398140-88-0P 430436-79-6P **430436-81-0P** 430437-14-2P 431062-12-3P 482609-97-2P 524699-47-6P 532989-17-6P

(pos. resist composition with wide exposure latitude)

L18 ANSWER 36 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:700522 HCAPLUS

DOCUMENT NUMBER: 141:215640

TITLE: Cyclic ethers and positive resist compositions

INVENTOR(S): Fujimori, Toru

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 76 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

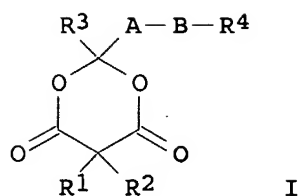
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004238304	A2	20040826	JP 2003-27161	2003 0204

PRIORITY APPLN. INFO.: JP 2003-27161

2003  
0204

OTHER SOURCE(S): MARPAT 141:215640

GI



AB The cyclic ethers comprise I (R1, R2 = H, alkyl, cycloalkyl, aryl, aralkyl; R1 and R2 may form ring or substituent bonded to ring via double bond; R3, R4 = alkyl, cycloalkyl, aryl, aralkyl; A = alkylene; B = heteroatom). The compns. comprise acid-generating agents by irradiation of actinic ray or radiation, alkali developer-insol. polymers showing solubility for alkali developers by the action of acids, and I. The compns. are useful for manufacture of semiconductor devices and circuit boards and photofabrication. The compns. show good roundness of contact holes and rectangular profiles.

IT 430436-81-0P

(cyclic ethers for **pos. resists** with good roundness of contact holes and rectangular profiles)

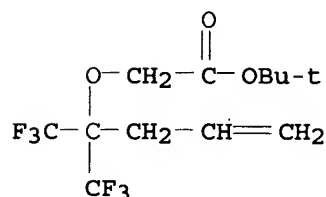
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

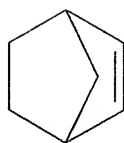
CMF C12 H16 F6 O3



CM 2

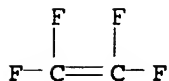
CRN 498-66-8

CMF C7 H10



CM 3

CRN 116-14-3  
CMF C2 F4



IC ICM C07D319-06  
ICS G03F007-004; G03F007-039; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 24  
IT 159296-87-4P 199432-82-1P 200808-68-0P 228101-60-8P  
250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 262617-13-0P, tert-Butyl norbornene-2-carboxylate-norbornene-tetrafluoroethylene copolymer 288620-13-3P 288620-15-5P 290300-33-3P 297742-32-6P 326591-96-2P 391232-36-3P 398140-38-0P 398140-71-1P 398140-77-7P 398140-88-0P, tert-Butyl norbornenecarboxylate-maleic anhydride-2-methyl-2-adamantyl acrylate-norbornenelactone acrylate copolymer 398140-91-5P 430436-79-6P, (a)-Norbornene-tetrafluoroethylene copolymer 430436-81-0P 430437-14-2P 431062-12-3P 482609-97-2P 524699-47-6P 532989-17-6P 744246-25-1P, tert-Butyl norbornenecarboxylate-butyrolactone norbornenecarboxylate-maleic anhydride copolymer (cyclic ethers for pos. resists with good roundness of contact holes and rectangular profiles)

L18 ANSWER 37 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:632360 HCAPLUS  
DOCUMENT NUMBER: 141:181968  
TITLE: Chemically amplified positive resist compositions with improved line edge roughness and suppressed scum generation  
INVENTOR(S): Fujimori, Toru  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 93 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004219571	A2	20040805	JP 2003-4801	2003 0110
PRIORITY APPLN. INFO.:				2003 0110

AB The pos. resist compns. contain (A) compds. generating acids by irradiation of actinic light or irradiation, (B) resins which are insol. or slightly soluble in alkali developers and become soluble to the alkali developers with the assistance of acids, and (C) basic



compds. bearing groups which generate polar groups with the assistance of acids.

IT 430436-81-0P

(chemical amplified pos. resist compns. with improved line edge roughness and suppressed scum generation)

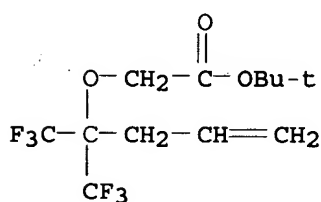
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

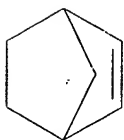
CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

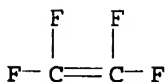
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



IC ICM G03F007-004

ICS G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 155040-27-0P 158593-28-3P 199432-82-1P 228101-60-8P  
 250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl  
 methacrylate copolymer 258871-96-4P 262617-13-0P  
 288620-13-3P 288620-15-5P 289706-85-0P 326591-96-2P  
 391232-36-3P 398140-38-0P 398140-47-1P 398140-57-3P

398140-71-1P 398140-88-0P, tert-Butyl norbornenecarboxylate-maleic anhydride-2-methyl-2-adamantyl acrylate-norbornenelactone acrylate copolymer 398140-91-5P 398141-13-4P 430436-66-1P 430436-79-6P 430436-81-0P 430436-92-3P 430437-14-2P, 4-(2-Hydroxyhexafluoroisopropyl)styrene-4-(1-methoxyethoxy)styrene copolymer 482609-97-2P 524699-47-6P 532989-17-6P 717848-87-8P, 4-[Bis(trifluoromethyl)hydroxymethyl]styrene-ethyl vinyl ether-methacrylonitrile copolymer  
(chemical amplified pos. resist compns. with improved line edge roughness and suppressed scum generation)

L18 ANSWER 38 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:451042 HCAPLUS

DOCUMENT NUMBER: 141:31080

TITLE: Radiation-sensitive resists and aryldialkylsulfonium salt photoacid generators

INVENTOR(S): Kodama, Kunihiro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 82 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004157158	A2	20040603	JP 2002-319905	2002 1101
PRIORITY APPLN. INFO.: JP 2002-319905				2002 1101

OTHER SOURCE(S): MARPAT 141:31080

AB The resists contain photoacid generators R1mArS+Y1Y2X- (Ar = aryl; R1 = OH, alkyl, alkoxy; Y1, Y2 = alkyl; Y1Y2 may form ring; X- = nonnucleophilic anion; M = 1-6; satisfying  $\geq 1$  of the following description;  $\geq 1$  of R1 = fluoroalkyl or fluoroalkoxy; R1 = C $\geq$ 8 alkyl or C $\geq$ 8 alkyl; Y1 and/or Y2 = C $\geq$ 6 alkyl; total carbon number of R1, Y1. and Y2  $\geq 14$ ; total carbon number of substituents on R1 and Ar  $\geq 7$ ). The resists show good storage stability and produce patterns showing high resolution and good profile.

IT 143336-94-1 607710-70-3 607710-71-4  
607710-72-5 607710-76-9 607710-77-0  
610300-97-5 610300-98-6 610301-00-3  
610301-01-4 610301-03-6 610301-04-7  
654076-36-5 676515-93-8

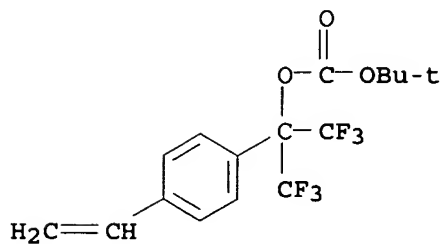
(aryldialkylsulfonium salt photoacid generators for radiation-sensitive resists)

RN 143336-94-1 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

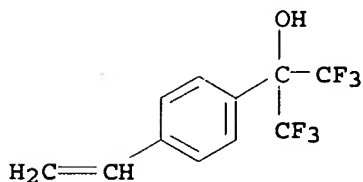
CM 1

CRN 143336-93-0  
CMF C16 H16 F6 O3



CM 2

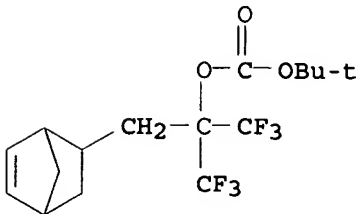
CRN 2386-82-5  
CMF C11 H8 F6 O



RN 607710-70-3 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

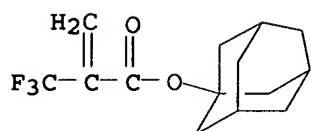
CM 1

CRN 196314-63-3  
CMF C16 H20 F6 O3



CM 2

CRN 188739-82-4  
CMF C14 H17 F3 O2



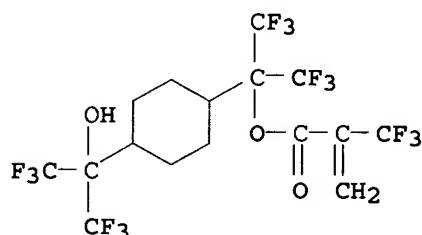
RN 607710-71-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-(2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl)cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

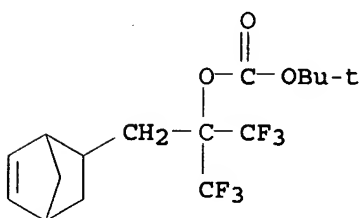
CMF C16 H13 F15 O3



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3



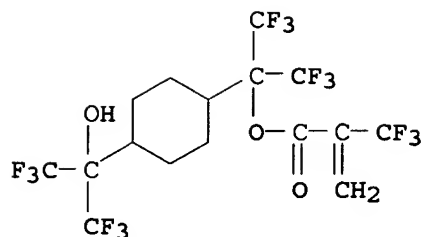
RN 607710-72-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl)cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

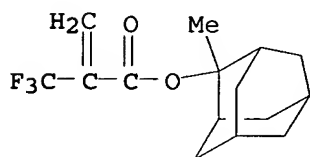
CMF C16 H13 F15 O3



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



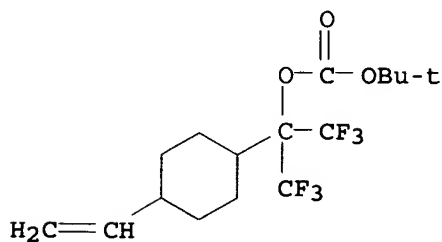
RN 607710-76-9 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylcyclohexyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 607710-75-8

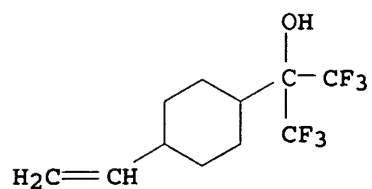
CMF C16 H22 F6 O3



CM 2

CRN 607710-74-7

CMF C11 H14 F6 O



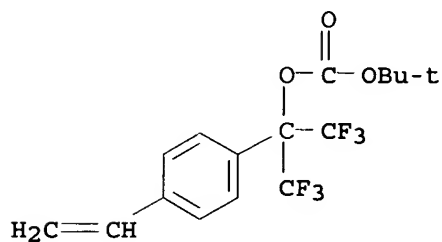
RN 607710-77-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

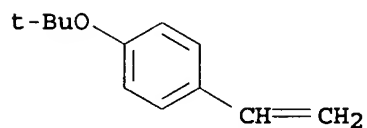
CMF C16 H16 F6 O3



CM 2

CRN 95418-58-9

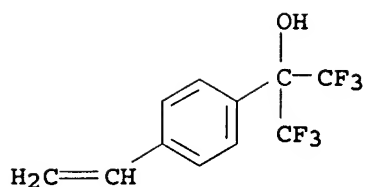
CMF C12 H16 O



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



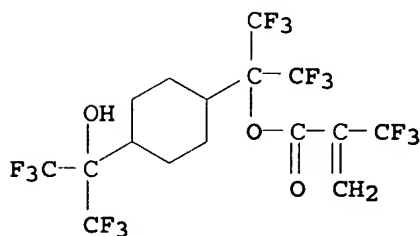
RN 610300-97-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 5-[2-(ethoxymethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

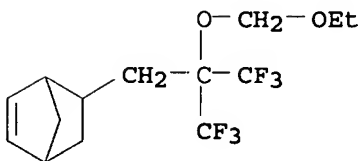
CMF C16 H13 F15 O3



CM 2

CRN 328114-61-0

CMF C14 H18 F6 O2



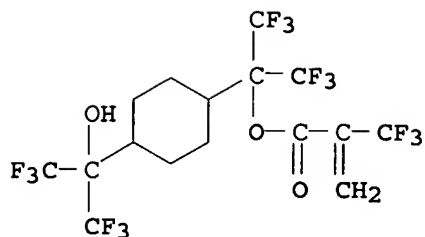
RN 610300-98-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

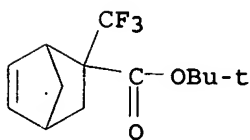
CMF C16 H13 F15 O3



CM 2

CRN 365568-55-4

CMF C13 H17 F3 O2



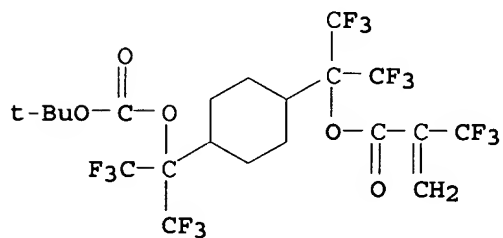
RN 610301-00-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with tricyclo[3.3.1.1.3,7]dec-1-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

CMF C21 H21 F15 O5

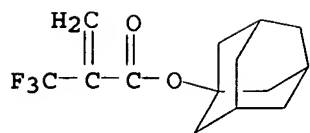


CM 2

CRN 188739-82-4

CMF C14 H17 F3 O2





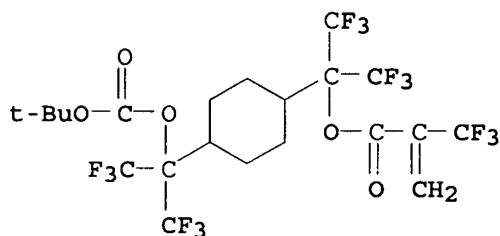
RN 610301-01-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[(1,1-dimethylethoxy)carbonyloxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

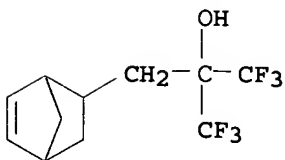
CMF C21 H21 F15 O5



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



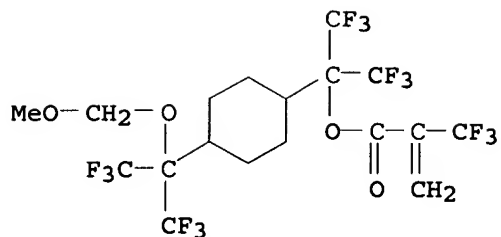
RN 610301-03-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610301-02-5

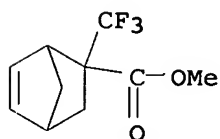
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CM 2

CRN 597581-42-5

CMF C10 H11 F3 O2



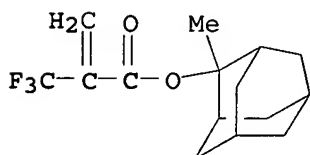
RN 610301-04-7 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl carbonate and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 188739-86-8

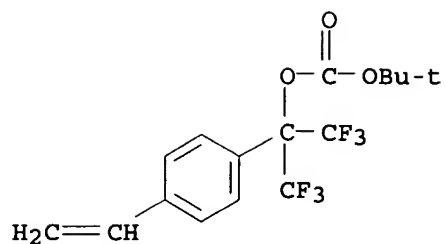
CMF C15 H19 F3 O2



CM 2

CRN 143336-93-0

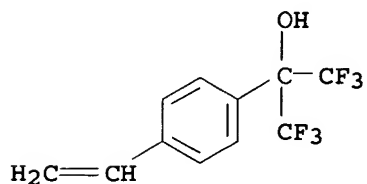
CMF C16 H16 F6 O3



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O

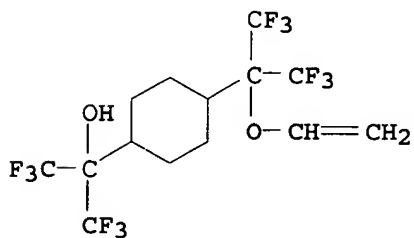


RN 654076-36-5 HCAPLUS

CN	2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1 <sup>3,7</sup> ]dec-2-yl ester, polymer with 4-[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)
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CM 1

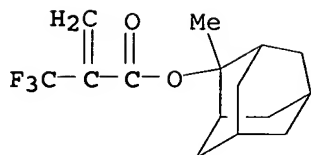
CRN 654076-31-0

CMF C14 H14 F12 O2

CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



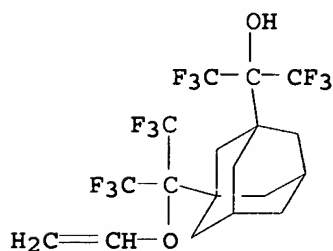
RN 676515-93-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-methyl-1-tricyclo[3.3.1.1.3,7]dec-1-ylethyl ester, polymer with 3-[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)tricyclo[3.3.1.1.3,7]decane-1-methanol (9CI) (CA INDEX NAME)

CM 1

CRN 676515-92-7

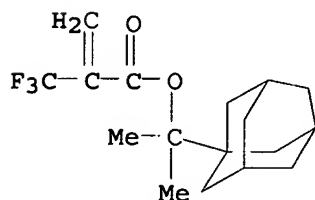
CMF C18 H18 F12 O2



CM 2

CRN 622378-55-6

CMF C17 H23 F3 O2



IC ICM G03F007-004

ICS C09K003-00; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 25

IT 141-07-1 3089-11-0 4356-60-9 17464-88-9 24979-69-9  
 143336-94-1 161679-94-3 162846-57-3 162846-59-5  
 185405-14-5 185502-14-1 250378-10-0 289623-64-9  
 312620-54-5 321164-59-4 345212-27-3 359635-35-1  
 366808-82-4 370866-39-0 391232-36-3 391613-77-7  
 398140-38-0 398140-43-7 398140-45-9 398140-57-3

398140-68-6 398140-69-7 398140-77-7 398140-80-2  
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 482609-97-2 508210-04-6 515876-73-0 518027-87-7  
 521303-16-2 524699-47-6 574735-94-7 607710-65-6  
 607710-67-8 607710-68-9 607710-69-0 607710-70-3  
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 610301-00-3 610301-01-4 610301-03-6  
 610301-04-7 610301-05-8 615278-35-8  
 654076-36-5 676515-93-8 697798-46-2  
 697798-47-3 697798-49-5

(aryldialkylsulfonium salt photoacid generators for  
 radiation-sensitive resists)

L18 ANSWER 39 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:389970 HCAPLUS

DOCUMENT NUMBER: 140:383121

TITLE: F2 excimer laser-sensitive positive  
 photoresist compositions with good coatability  
 and dry etchability

INVENTOR(S): Kanna, Shinichi; Mizutani, Kazuyoshi; Sasaki,  
 Tomoya

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 65 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004138887	A2	20040513	JP 2002-304421	2002 1018

PRIORITY APPLN. INFO.: JP 2002-304421

2002  
1018

AB The photoresist compns. sensitive to vacuum UV ( $\leq 160$  nm)  
 contain resins comprising 1st repeating units  $\text{CF}_2\text{C}(\text{XZ})\text{F}$  ( $\text{X} = \text{O}, \text{S}$ ;  
 $\text{Z} =$  organic group with no acid decomposability) and 2nd repeating  
 units having groups that are converted to alkali-soluble groups by  
 acid decomposition so as to increase solubility of the resins in alkali  
 developers. The resins may further contain cycloolefin units.

IT 685523-12-0 685523-13-1 685565-75-7

(F2 excimer laser-sensitive pos. photoresists  
 with good coatability and dry etchability)

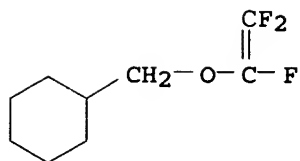
RN 685523-12-0 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-  
 trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester,  
 polymer with [[[trifluoroethenyl]oxy]methyl]cyclohexane (9CI) (CA  
 INDEX NAME)

CM 1

CRN 685522-89-8

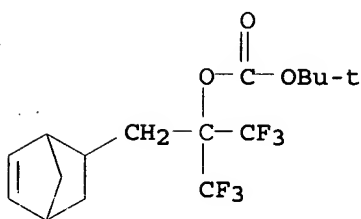
CMF C9 H13 F3 O



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3



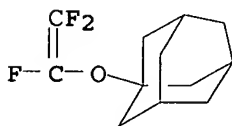
RN 685523-13-1 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with 1-[(trifluoroethenyl)oxy]tricyclo[3.3.1.1<sup>3,7</sup>]decane (9CI) (CA INDEX NAME)

CM 1

CRN 685522-91-2

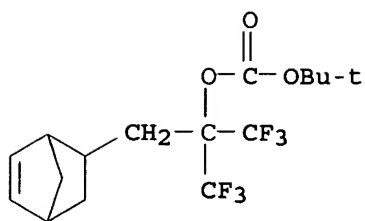
CMF C12 H15 F3 O



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3



RN 685565-75-7 HCAPLUS

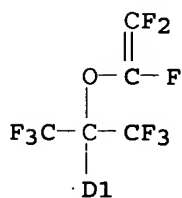
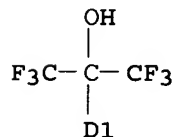
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha'$ -bis(trifluoromethyl) [2,2,2-trifluoro-1-[(trifluoroethenyl)oxy]-1-(trifluoromethyl)ethyl]cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 685565-74-6

CMF C14 H11 F15 O2

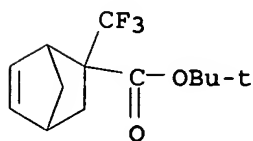
CCI IDS



CM 2

CRN 365568-55-4

CMF C13 H17 F3 O2



IC ICM G03F007-039  
 ICS C08F216-14; C08F228-04; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 IT 685523-12-0 685523-13-1 685523-14-2  
 685523-15-3 685565-75-7  
 (F2 excimer laser-sensitive pos. photoresists  
 with good coatability and dry etchability)

L18 ANSWER 40 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:326237 HCAPLUS  
 DOCUMENT NUMBER: 140:347511  
 TITLE: Photoresists with hydroxylated,  
 photoacid-cleavable groups  
 INVENTOR(S): Farnham, William Brown; Feiring, Andrew L.;  
 Schadt, Frank L., III; Qiu, Weiming  
 PATENT ASSIGNEE(S): E.I. Du Pont de Nemours and Company, USA  
 SOURCE: Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1411389	A1	20040421	EP 2003-256267	2003 1003

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
 MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,  
 EE, HU, SK

US 2004126697	A1	20040701	US 2003-669492	2003 0924
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JP 2004280049	A2	20041007	JP 2003-346258	2003 1003
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PRIORITY APPLN. INFO.:

US 2002-415855P	P	2002 1003
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AB The present invention pertains to photoimaging and the use of  
 photoresists (pos.-working and/or neg.-working) for imaging in the  
 production of semiconductor devices. The present invention also  
 pertains to novel hydroxy ester-containing polymer compns. that are  
 useful as base resins in resists and potentially in many other  
 applications.

IT 680975-27-3P 680975-29-5P 680975-30-8P  
 (preparation of photoresists with hydroxylated, photoacid  
 -cleavable groups)

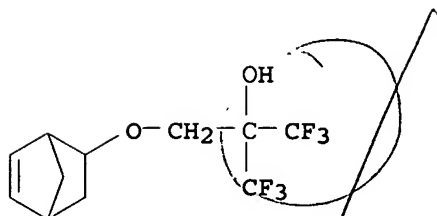
RN 680975-27-3 HCAPLUS

CN 2-Propenoic acid, 2-hydroxy-1,1,2-trimethylpropyl ester, polymer  
 with 2-[(bicyclo[2.2.1]hept-5-en-2-yloxy)methyl]-1,1,1,3,3,3-  
 hexafluoro-2-propanol and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

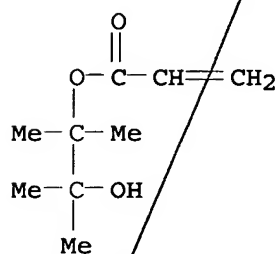


CRN 305815-63-8  
CMF C11 H12 F6 O2



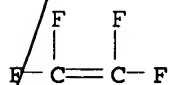
CM 2

CRN 97325-36-5  
CMF C9 H16 O3



CM 3

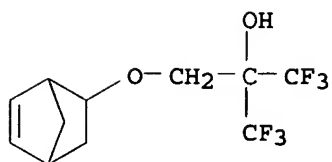
CRN 116-14-3  
CMF C2 F4



RN 680975-29-5 HCAPLUS  
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
2-[(bicyclo[2.2.1]hept-5-en-2-yloxy)methyl]-1,1,1,3,3,3-hexafluoro-  
2-propanol, 2-hydroxy-1,1,2-trimethylpropyl 2-propenoate and  
tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

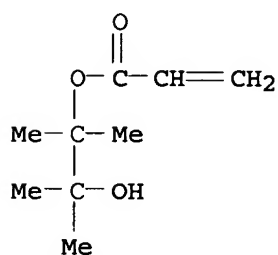
CRN 305815-63-8  
CMF C11 H12 F6 O2



CM 2

CRN 97325-36-5

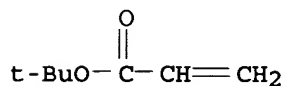
CMF C9 H16 O3



CM 3

CRN 1663-39-4

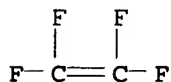
CMF C7 H12 O2



CM 4

CRN 116-14-3

CMF C2 F4



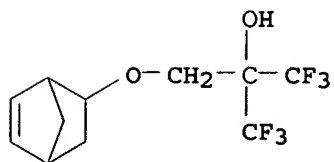
RN 680975-30-8 HCAPLUS

CN 2-Propenoic acid, 2-hydroxy-1,1,2-trimethylpropyl ester, polymer  
with 2-[(bicyclo[2.2.1]hept-5-en-2-yloxy)methyl]-1,1,1,3,3,3-  
hexafluoro-2-propanol, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl  
2-propenoate and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 305815-63-8

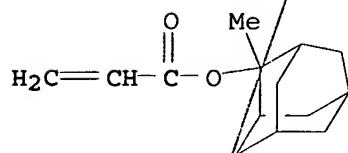
CMF C11 H12 F6 O2



CM 2

CRN 249562-06-9

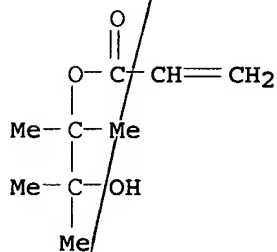
CMF C14 H20 O2



CM 3

CRN 97325-36-5

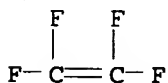
CMF C9 H16 O3



CM 4

CRN 116-14-3

CMF C2 F4



IC ICM G03F007-039

ICS G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 680975-27-3P 680975-29-5P 680975-30-8P

(preparation of photoresists with hydroxylated, photoacid  
-cleavable groups)REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L18 ANSWER 41 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:271619 HCAPLUS  
 DOCUMENT NUMBER: 140:311999  
 TITLE: Photosensitive acid generators and  
 photosensitive compositions  
 INVENTOR(S): Kodama, Kunihiro  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 83 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

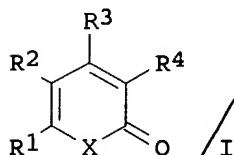
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004099726	A2	20040402	JP 2002-262750	2002 0909

PRIORITY APPLN. INFO.:

JP 2002-262750

2002  
0909OTHER SOURCE(S):  
GI

MARPAT 140:311999



AB The disclosed photoacid generators are compds. of the formula I ( R1-4 = H, alkyl, aryl, halo, alkoxy;  $\geq 1$  of R1-4 is a substituent having OSO<sub>2</sub>R end group; R = alkyl, aryl, camphor moiety; X = O, NH, NR<sub>5</sub>, CH<sub>n</sub>NR<sub>5m</sub>; R<sub>5</sub> =alkyl; n, m = 0, 1, 2; n + m = 2; adjacent two of R1-4 may combine to form rings). The disclosed pos.-working photosensitive composition comprises the photoacid generator and an alkali-soluble resin. The disclosed neg.-working photosensitive composition comprises the photoacid generator, alkali-soluble resin and acid crosslinking agent. The photosensitive composition exhibit high sensitivity, excellent resolution, and image quality.

IT 143336-94-1 370102-83-3 607710-71-4  
 607710-72-5 607710-76-9 607710-77-0  
 610300-97-5 610300-98-6 610301-01-4  
 610301-04-7 676515-89-2 676515-90-5

676515-91-6 676515-93-8

(resin for photoacid generation type photoresist compns.)

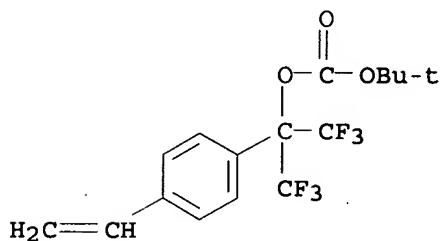
RN 143336-94-1 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

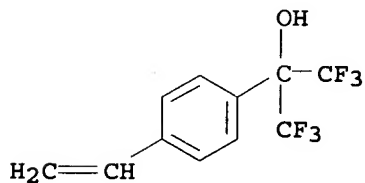
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



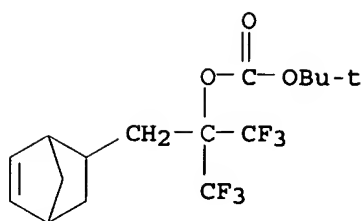
RN 370102-83-3 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

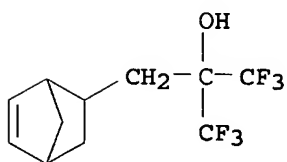
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



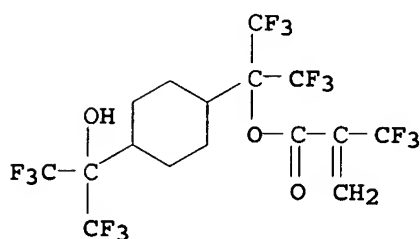
RN 607710-71-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

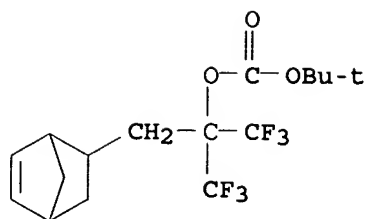
CMF C16 H13 F15 O3



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3



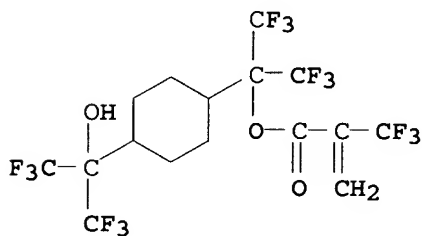
RN 607710-72-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1.3]dec-2-yl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

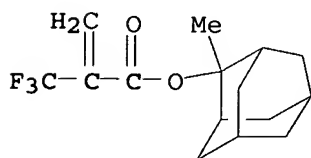
CMF C16 H13 F15 O3



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



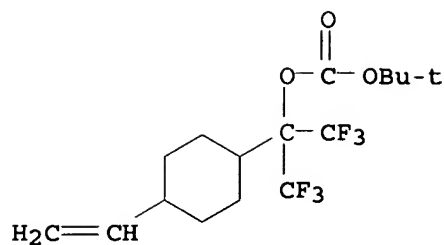
RN 607710-76-9 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylcyclohexyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 607710-75-8

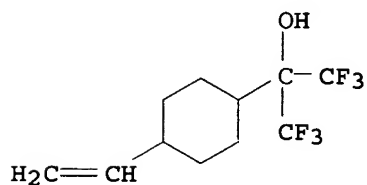
CMF C16 H22 F6 O3



CM 2

CRN 607710-74-7

CMF C11 H14 F6 O



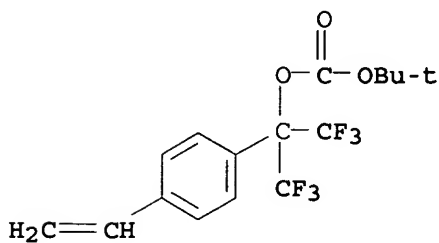
RN 607710-77-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

CMF C16 H16 F6 O3

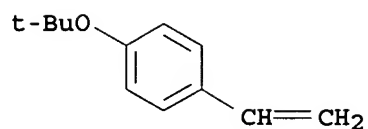


CM 2

CRN 95418-58-9

CMF C12 H16 O

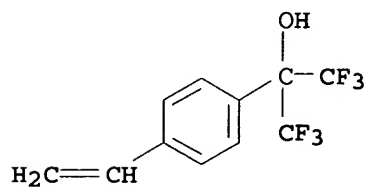




CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



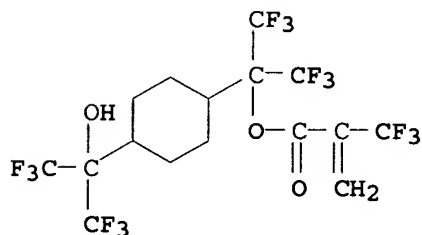
RN 610300-97-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 5-[2-(ethoxymethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

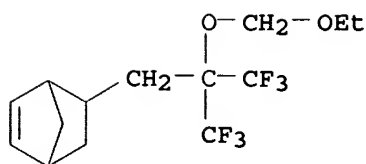
CMF C16 H13 F15 O3



CM 2

CRN 328114-61-0

CMF C14 H18 F6 O2



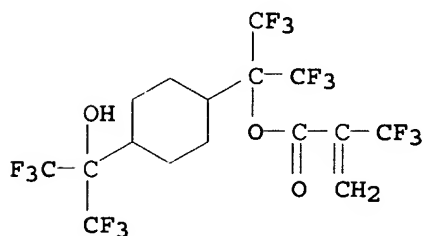
RN 610300-98-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

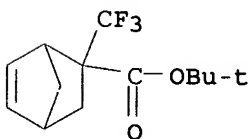
CMF C16 H13 F15 O3



CM 2

CRN 365568-55-4

CMF C13 H17 F3 O2



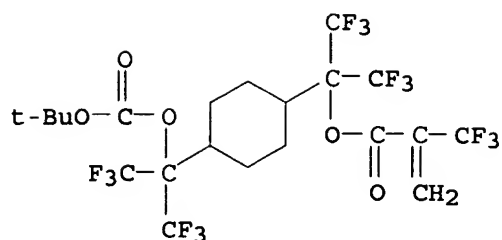
RN 610301-01-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

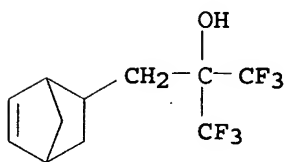
CMF C21 H21 F15 O5



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



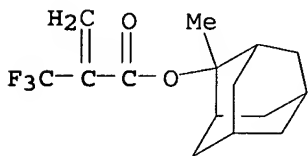
RN 610301-04-7 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl carbonate and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 188739-86-8

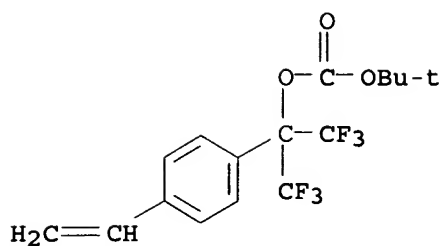
CMF C15 H19 F3 O2



CM 2

CRN 143336-93-0

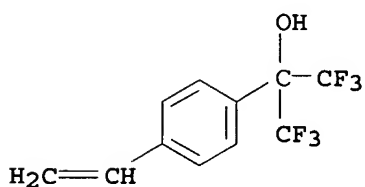
CMF C16 H16 F6 O3



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



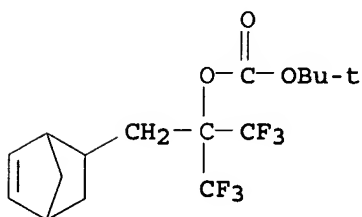
RN 676515-89-2 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

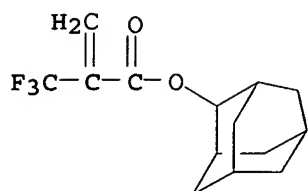
CMF C16 H20 F6 O3



CM 2

CRN 188739-84-6

CMF C14 H17 F3 O2



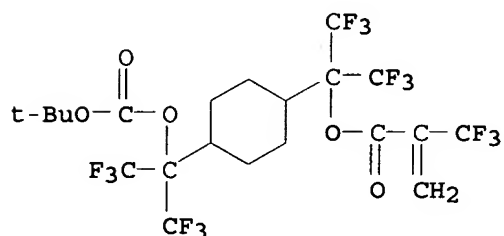
RN 676515-90-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with tricyclo[3.3.1.1.3,7]dec-2-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

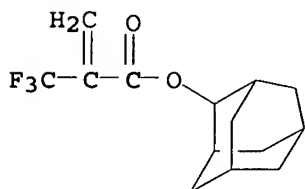
CMF C21 H21 F15 O5



CM 2

CRN 188739-84-6

CMF C14 H17 F3 O2



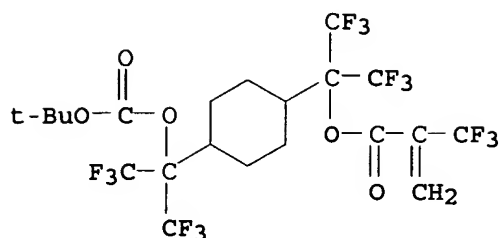
RN 676515-91-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 1-[4-[1-[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

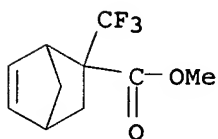
CMF C21 H21 F15 O5



CM 2

CRN 597581-42-5

CMF C10 H11 F3 O2



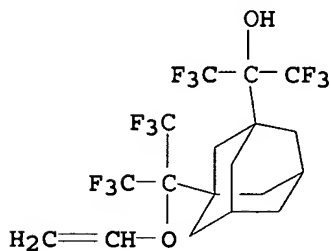
RN 676515-93-8 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with 3-[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha$ , $\alpha$ -bis(trifluoromethyl)tricyclo[3.3.1.1<sup>3,7</sup>]decane-1-methanol (9CI) (CA INDEX NAME)

CM 1

CRN 676515-92-7

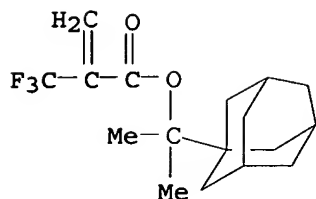
CMF C18 H18 F12 O2



CM 2

CRN 622378-55-6

CMF C17 H23 F3 O2



IC ICM C09K003-00  
ICS C07C309-65; C07C381-12; C07D311-52; G03F007-004; G03F007-038;  
G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38

IT 24979-69-9 24979-70-2 143336-94-1 185405-14-5  
250378-10-0 289623-64-9 312620-54-5 321164-59-4  
345212-27-3 359635-35-1 366808-82-4 370102-83-3  
370866-39-0 391232-36-3 391613-77-7 398140-43-7  
398140-45-9 398140-54-0 398140-57-3 398140-59-5  
398140-68-6 398140-69-7 398140-77-7 398140-80-2  
406702-00-9 430437-18-6 459418-30-5 482609-97-2  
515876-73-0 515876-74-1 521303-15-1 521303-16-2  
574735-94-7 607710-65-6 607710-66-7 607710-68-9  
607710-71-4 607710-72-5 607710-73-6  
607710-76-9 607710-77-0 608140-58-5  
610300-96-4 610300-97-5 610300-98-6  
610301-01-4 610301-04-7 610301-05-8  
615278-35-8 676515-85-8 676515-86-9 676515-87-0  
676515-88-1 676515-89-2 676515-90-5  
676515-91-6 676515-93-8  
(resin for photoacid generation type photoresist  
compns.)

L18 ANSWER 42 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:250275 HCAPLUS  
DOCUMENT NUMBER: 140:278429  
TITLE: Positive photoresist compositions for F2  
excimer lasers with good heat resistance and  
suppressed line edge roughness  
INVENTOR(S): Mizutani, Kazuyoshi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 61 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004093768	A2	20040325	JP 2002-253255	2002 0830

PRIORITY APPLN. INFO.: JP 2002-253255  
2002  
0830

AB The compns. comprise (A) photoacid generators and (B) resins

increasing their alkali solubility by acid decomposition, wherein the resins have crosslinked repeating units  $\text{CRArBcRCr}(\text{OLOCRc}'\text{CRA}'\text{Rb}')$  ( $\text{Ra}$ ,  $\text{Rb}$ ,  $\text{Rc}$ ,  $\text{Ra}'$ ,  $\text{Rb}'$ ,  $\text{Rc}'$  = H, F, fluoroalkyl; L = linking group).

IT 674781-14-7P

(pos. photoresists for F2 excimer lasers

with good heat resistance and suppressed line edge roughness)

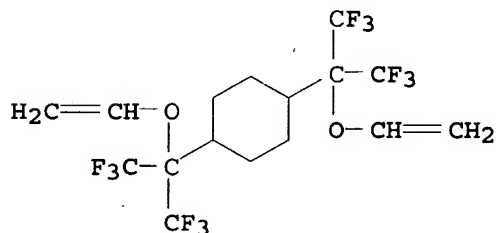
RN 674781-14-7 HCAPLUS

CM 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1,4-bis[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexane and  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 674781-13-6

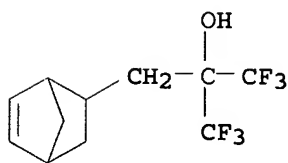
CMF C16 H16 F12 O2



CM 2

CRN 196314-61-1

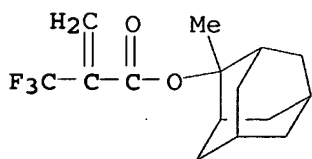
CMF C11 H12 F6 O



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2





IC ICM G03F007-039  
 ICS C08F016-32; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT 674777-92-5P 674781-14-7P  
 (pos. photoresists for F2 excimer lasers  
 with good heat resistance and suppressed line edge roughness)

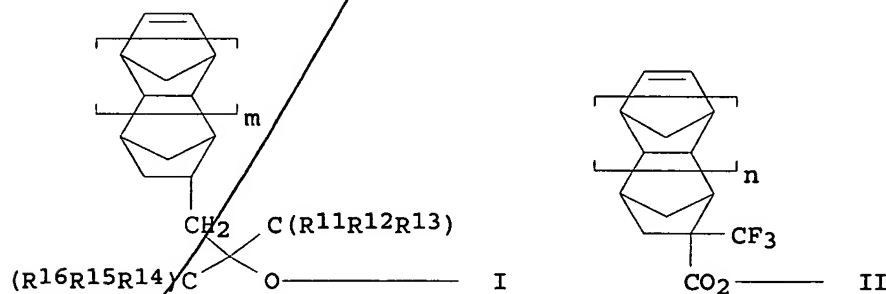
L18 ANSWER 43 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:250257 HCAPLUS  
 DOCUMENT NUMBER: 140:294777  
 TITLE: Positive photoresist compositions for F2  
 excimer lasers with good heat resistance and  
 suppressed line edge roughness  
 INVENTOR(S): Mizutani, Kazuyoshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 61 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004093690	A2	20040325	JP 2002-251870	2002 0829

PRIORITY APPLN. INFO.: JP 2002-251870

2002  
0829

GI



AB The compns. comprise (A) photoacid generators and (B) resins  
 increasing their alkali solubility by acid decomposition, wherein the resins  
 have  $\geq 1$  repeating units derived from monomers having  
 $\geq 2$  residual groups selected from I (R<sub>11</sub>-16 = H, F,  
 fluoroalkyl; R<sub>11</sub> = R<sub>12</sub> = R<sub>13</sub> = R<sub>14</sub> = R<sub>15</sub> = R<sub>16</sub>  $\neq$  H; m = 0,  
 1) and II (n = same as m).

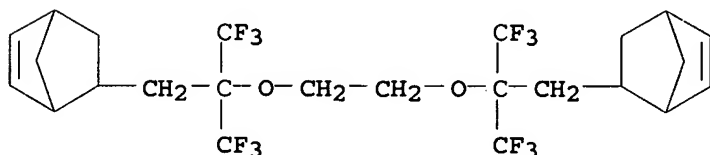
IT 674777-91-4P  
 (pos. photoresists for F2 excimer lasers  
 with good heat resistance and suppressed line edge roughness)  
 RN 674777-91-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 5,5'-[1,2-ethanediylbis[oxy[2,2-bis(trifluoromethyl)-2,1-ethanediyl]]]bis[bicyclo[2.2.1]hept-2-ene] (9CI) (CA INDEX NAME)

CM 1

CRN 674777-90-3

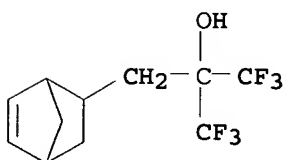
CMF C24 H26 F12 O2



CM 2

CRN 196314-61-1

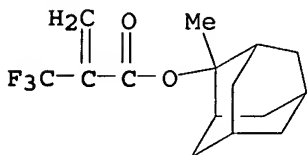
CMF C11 H12 F6 O



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



IC ICM G03F007-039

ICS C08F232-00; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 674777-91-4P 674777-92-5P

(pos. photoresists for F2 excimer lasers

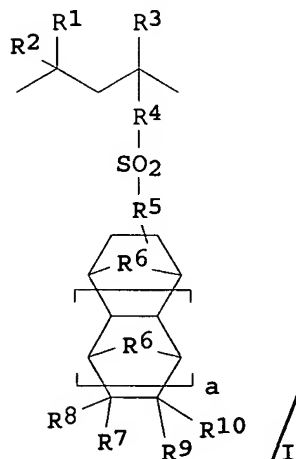
with good heat resistance and suppressed line edge roughness)

L18 ANSWER 44 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:180145 HCAPLUS  
 DOCUMENT NUMBER: 140:225800  
 TITLE: Chemically amplified photoresists and method for pattern formation  
 INVENTOR(S): Harada, Yuji; Hatakeyama, Jun; Kawai, Yoshio; Sasako, Masaru; Endo, Masataka; Kishimura, Shinji; Maeda, Kazuhiko; Otani, Michitaka; Komoritani, Haruhiko  
 PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan; Matsushita Electric Industrial Co., Ltd.; Central Glass Co., Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 41 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004067972	A2	20040304	JP 2002-233045	2002 0809
PRIORITY APPLN. INFO.:				JP 2002-233045
				2002 0809

GI



AB The photoresists contain polymers of Mw 1000-500,000 having repeating units I [R1-R3 = H, F; (fluorinated) C1-40 alkyl; R4 = single bond, (fluorinated) C1-40 alkylene; R5 = single bond, O, (fluorinated) C1-40 alkylene; R6 = methylene, O, S; R7-R10 = H, F, fluorinated C1-4 alkyl, R11OR12, R11CO2R12, OR12; R11 = single bond, (fluorinated) C1-40 alkylene; R12 = H, acid-labile group; a = 0, 1]. The photoresists are patternwise exposed to 100-180-nm

or 1-30-nm high-energy beams (e.g., F2 laser beams, Ar2 laser beams, soft x rays) and developed (after post-exposure baking).

IT 666258-21-5P 666258-22-6P 666258-24-8P  
666258-26-0P

(chemical amplified pos. photoresists showing high sensitivity to high-energy beams)

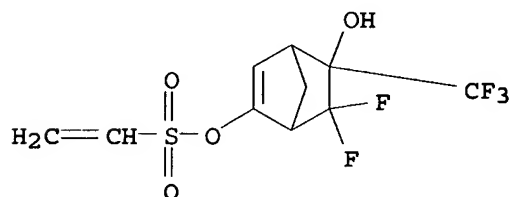
RN 666258-21-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 6,6-difluoro-5-hydroxy-5-(trifluoromethyl)bicyclo[2.2.1]hept-2-en-2-yl ethenesulfonate and 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 666258-15-7

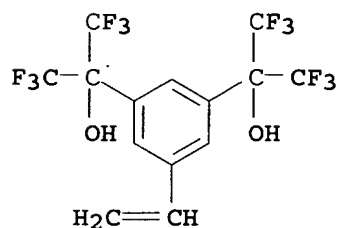
CMF C10 H9 F5 O4 S



CM 2

CRN 568587-26-8

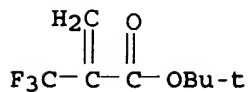
CMF C14 H8 F12 O2



CM 3

CRN 105935-24-8

CMF C8 H11 F3 O2



RN 666258-22-6 HCAPLUS

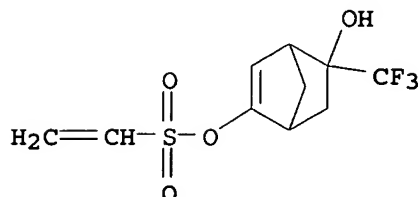
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-



CM 1

CRN 666258-23-7

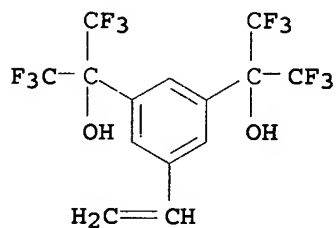
CMF C10 H11 F3 O4 S



CM 2

CRN 568587-26-8

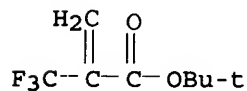
CMF C14 H8 F12 O2



CM 3

CRN 105935-24-8

CMF C8 H11 F3 O2



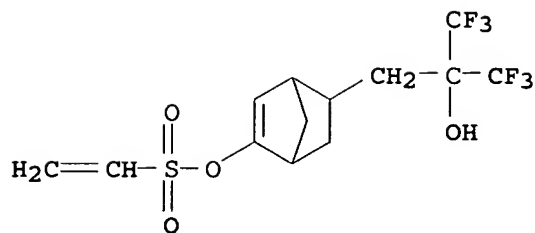
RN 666258-26-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -tetrakis(trifluoromethyl)-1,3-benzenedimethanol and 5-[3,3,3-trifluoro-2-hydroxy-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-en-2-yl ethenesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 666258-25-9

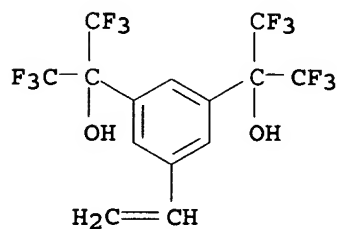
CMF C13 H14 F6 O4 S



CM 2

CRN 568587-26-8

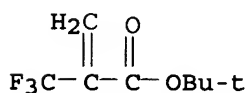
CMF C14 H8 F12 O2



CM 3

CRN 105935-24-8

CMF C8 H11 F3 O2



IC ICM C08F028-02

ICS C08F212-14; C08F220-22; C08F232-00; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 666258-16-8P 666258-18-0P 666258-19-1P 666258-20-4P

666258-21-5P 666258-22-6P 666258-24-8P

666258-26-0P

(chemical amplified pos. photoresists showing high sensitivity to high-energy beams)

L18 ANSWER 45 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:98005 HCAPLUS

DOCUMENT NUMBER: 140:172185

TITLE: Positive-working resist composition containing photoacid and resin suitable for 157-nm excimer laser

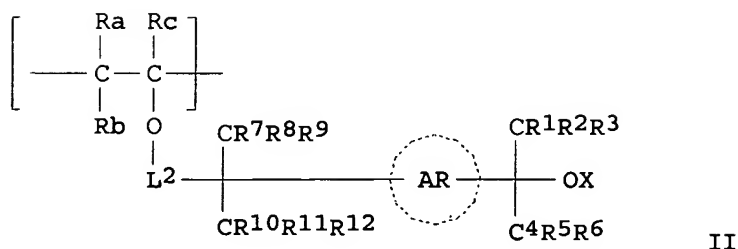
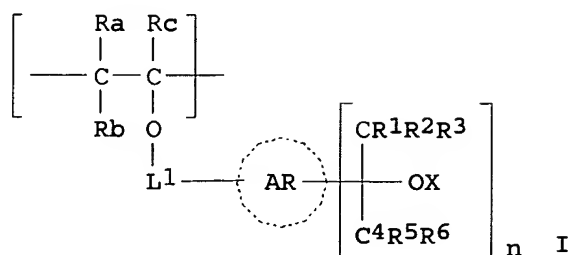
INVENTOR(S): Mizutani, Kazuyoshi; Sasaki, Tomoya; Kanna, Shinichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 61 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004037978	A2	20040205	JP 2002-196924	2002 0705
PRIORITY APPLN. INFO.:			JP 2002-196924	2002 0705

GI



AB The pos.-working resist composition comprises (A) a resin I (Ra-c = H, F, fluorinated alkyl; L1 = single, divalent bonding group; R1-6 = H, F, fluorinated alkyl; AR = cyclic hydrocarbon; n = 1, 2; and X = group decomposable with acid or H) whose solubility in an alkali developer increases upon the interaction with a photoacid and (B) a photoacid. Alternatively, the resin is represented by II (R7-12 = R1-6). The composition exhibited sufficient optical transparency at 157 nm.

IT 654076-30-9P 654076-32-1P  
 (resin; pos.-working resist composition containing photoacid and resin suitable for 157-nm excimer laser)

RN 654076-30-9 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with

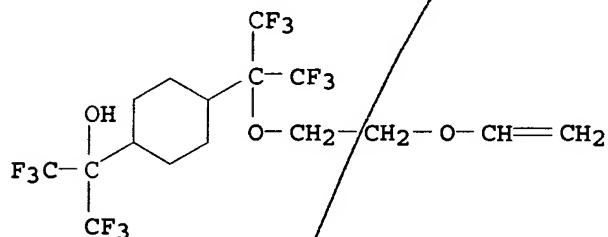


$\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 4-[1-[2-(ethenyloxy)ethoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 654076-29-6

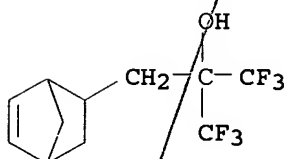
CMF C16 H18 F12 O3



CM 2

CRN 196314-61-1

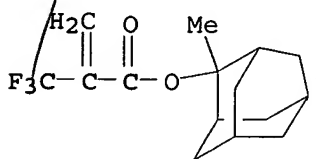
CMF C11 H12 F6 O



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



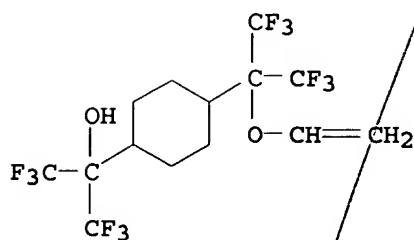
RN 654076-32-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 4-[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 654076-31-0

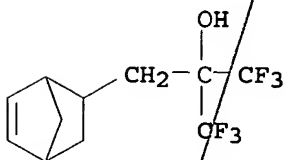
CMF C14 H14 F12 O2



CM 2

CRN 196314-61-1

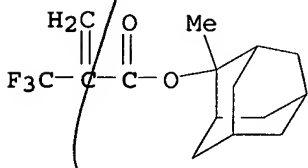
CMF C11 H12 F6 O



CM 3

CRN 188739-86-8

CMF C15 H19 F3 O2



IT 654076-33-2 654076-34-3 654076-35-4

654076-36-5

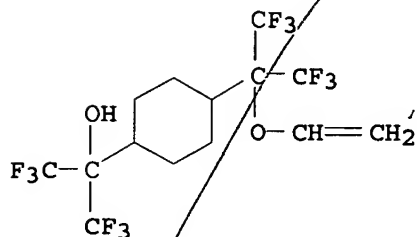
(resin; pos.-working resist composition containing photoacid  
and resin suitable for 157-nm excimer laser)

RN 654076-33-2 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-,  
1,1-dimethylethyl ester, polymer with 4-[1-(ethenyloxy)-2,2,2-  
trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -  
bis(trifluoromethyl)cyclohexanemethanol and 2-  
methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl 2-(trifluoromethyl)-2-  
propenoate (9CI) (CA INDEX NAME)

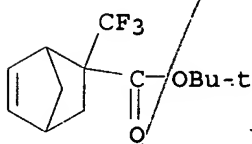
CM 1

CRN 654076-31-0  
CMF C14 H14 F12 O2



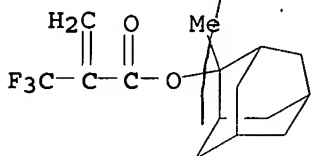
CM 2

CRN 365568-55-4  
CMF C13 H17 F3 O2



CM 3

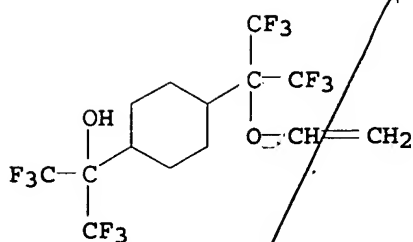
CRN 188739-86-8  
CMF C15 H19 F3 O2



RN 654076-34-3 HCAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 4-[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol and 3-hydroxytricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

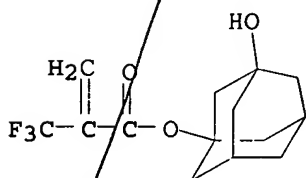
CRN 654076-31-0  
CMF C14 H14 F12 O2



CM 2

CRN 521913-15-5

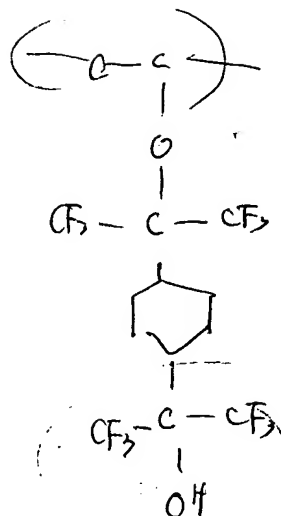
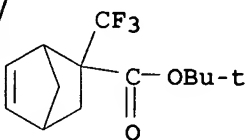
CMF C14 H17 F3 O3



CM 3

CRN 365568-55-4

CMF C13 H17 F3 O2



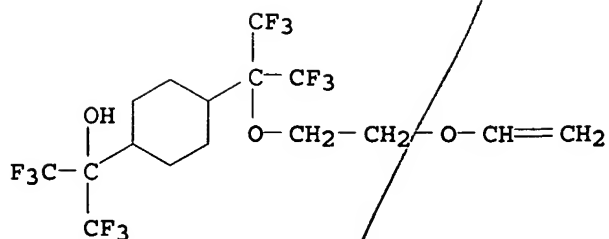
RN 654076-35-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.13,7]dec-1-yl ester, polymer with 1-ethenyl-4-[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 4-[1-[2-(ethenyloxy)ethoxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 654076-29-6

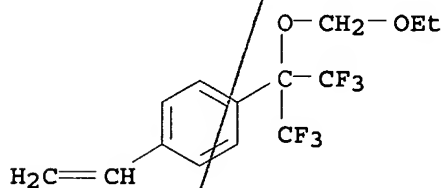
CMF C16 H18 F12 O3



CM 2

CRN 367522-51-8

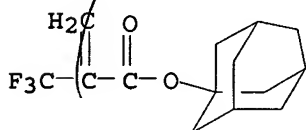
CMF C14 H14 F6 O2



CM 3

CRN 188739-82-4

CMF C14 H17 F3 O2



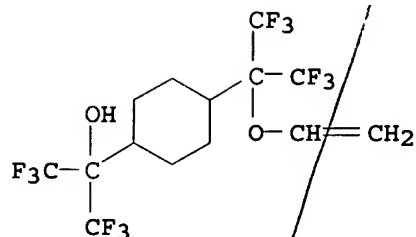
RN 654076-36-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 4-[1-(ethenyloxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 654076-31-0

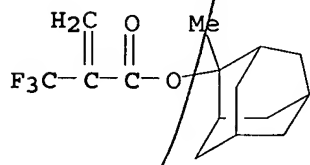
CMF C14 H14 F12 O2



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



IC ICM G03F007-039

ICS C08F016-26; C08F220-22; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 654076-30-9P 654076-32-1P

(resin; pos.-working resist composition containing photoacid and resin suitable for 157-nm excimer laser)

IT 654076-33-2 654076-34-3 654076-35-4

654076-36-5

(resin; pos.-working resist composition containing photoacid and resin suitable for 157-nm excimer laser)

L18 ANSWER 46 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:32911 HCAPLUS

DOCUMENT NUMBER: 140:102025

TITLE: Photoresists containing sulfonate ester photoacid generators providing patterns with good edge sharpness

INVENTOR(S): Kanna, Shinichi; Mizutani, Kazuyoshi; Sasaki, Tomoya

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004012874	A2	20040115	JP 2002-167145	

USHA SHRESTHA EIC 1700 REM 4B28

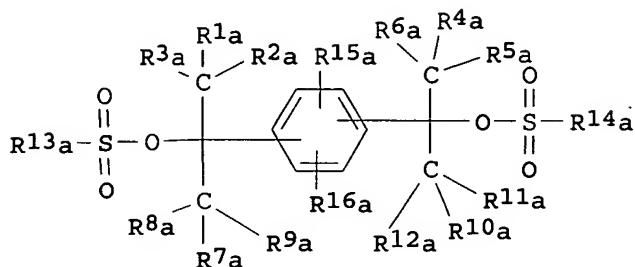
2002  
0607

PRIORITY APPLN. INFO.:

JP 2002-167145

2002  
0607OTHER SOURCE(S):  
GI

MARPAT 140:102025



I

AB The photoresists contain sulfonate ester photoacid generators, I [R1a-12a = H, F, (substituted) alkyl; at least one of R1a-12a is F or fluoro-substituted alkyl; R13a-14a = (substituted) alkyl, aryl, aralkyl], etc. Also claimed are chemical amplified pos.-working photoresists containing acid-labile alkali-insol. resins in addition to the photoacid generators. The photoacid generators can be included in neg.-working photoresists which contain alkali-soluble resins decreasing solubility in alkaline developers by acids.

IT 643024-59-3P, Acrylonitrile-3-(5-bicyclo[2.2.1]hepten-2-yl)-1,1,1-trifluoro-2-(trifluoromethyl)-2-propan-2-ol copolymer ester with tert-Butyl dicarbonate

(photoresists containing sulfonate ester photoacid generators)

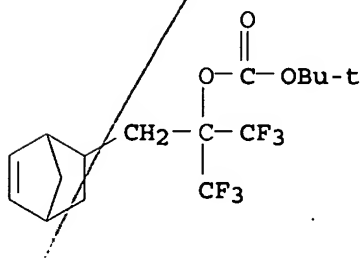
RN 643024-59-3 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

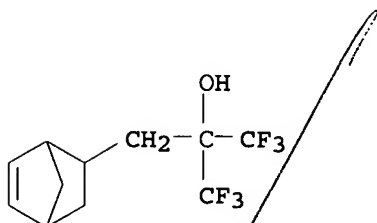
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



CM 3

CRN 107-13-1

CMF C3 H3 N



IT 143336-94-1 380886-73-7 643024-60-6

(photoresists containing sulfonate ester photoacid generators)

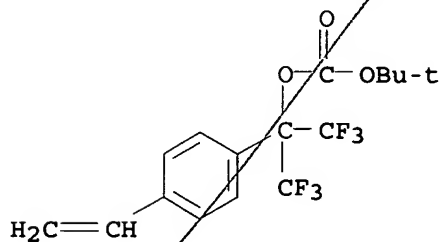
RN 143336-94-1 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

CMF C16 H16 F6 O3

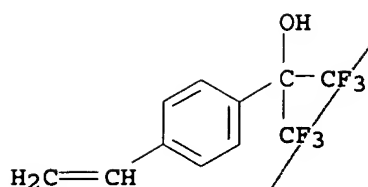


CM 2

CRN 2386-82-5

CMF C11 H8 F6 O





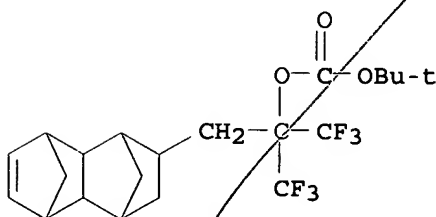
RN 380886-73-7 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 2,2,2-trifluoro-1-  
 [(1,2,3,4,4a,5,8,8a-octahydro-1,4:5,8-dimethanonaphthalen-2-  
 yl)methyl]-1-(trifluoromethyl)ethyl ester, polymer with  
 1,2,3,4,4a,5,8,8a-octahydro- $\alpha,\alpha$ -bis(trifluoromethyl)-  
 1,4:5,8-dimethanonaphthalene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 380886-59-9

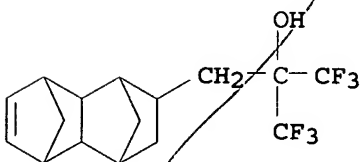
CMF C21 H26 F6 O3



CM 2

CRN 365533-00-2

CMF C16 H18 F6 O



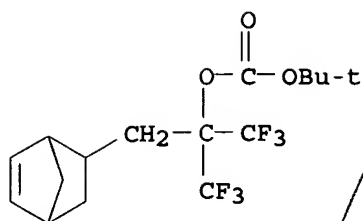
RN 643024-60-6 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-  
 trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester,  
 polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hep  
 t-5-ene-2-ethanol and 2-methyl-2-propenenitrile (9CI) (CA INDEX  
 NAME)

CM 1

CRN 196314-63-3

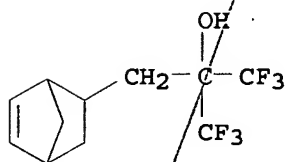
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

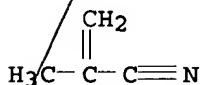
CMF C11 H12 F6 O



CM 3

CRN 126-98-7

CMF C4 H5 N



IC ICM G03F007-004

ICS G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 643024-59-3P, Acrylonitrile-3-(5-bicyclo[2.2.1]hepten-2-yl)-1,1,1-trifluoro-2-(trifluoromethyl)-2-propan-2-ol copolymer ester with tert-Butyl dicarbonate  
(photoresists containing sulfonate ester photoacid generators)

IT 143336-94-1 380886-73-7 594865-69-7

643024-60-6 643024-62-8 643024-63-9 643024-64-0

643024-65-1 643024-66-2 643024-67-3 643024-68-4

643024-69-5 643024-70-8

(photoresists containing sulfonate ester photoacid generators)

L18 ANSWER 47 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:989982 HCAPLUS

DOCUMENT NUMBER: 140:50311

TITLE: Positive photoresist composition

INVENTOR(S): Sasaki, Tomoya; Mizutani, Kazuyoshi; Kanna,

PATENT ASSIGNEE(S): Shinichi  
 SOURCE: Fuji Photo Film Co., Ltd., Japan  
 U.S. Pat. Appl. Publ., 68 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003232277	A1	20031218	US 2003-422789	2003 0425
JP 2003316007	A2	20030706	JP 2002-126433	2002 0426
JP 2004062045	A2	20040226	JP 2002-223234	2002 0731
JP 2004062049	A2	20040226	JP 2002-223386	2002 0731
PRIORITY APPLN. INFO.:			JP 2002-126433	A 2002 0426
			JP 2002-223234	A 2002 0731
			JP 2002-223386	A 2002 0731

AB The invention relates to a pos. resist composition comprising: (A1) a resin containing at least one type of repeating unit represented by the specific formula and addnl. containing at least one type of repeating unit represented by the specific formula, which increases the solubility in an alkali developing solution by the action of an acid, and (B) a compound which is capable of generating an acid by the action of actinic ray or radiation. The composition shows good transparency towards  $\leq 160$  nm light.

IT 634920-80-2P 634920-83-5P 634920-89-1P  
 634920-91-5P 634920-97-1P 634921-01-0P  
 (resin; pos. photoresist composition)

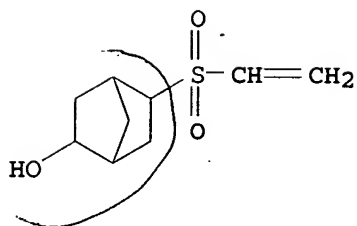
RN 634920-80-2 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene and 5-(ethenylsulfonyl)bicyclo[2.2.1]heptan-2-ol (9CI) (CA INDEX NAME)

CM 1

CRN 634920-70-0

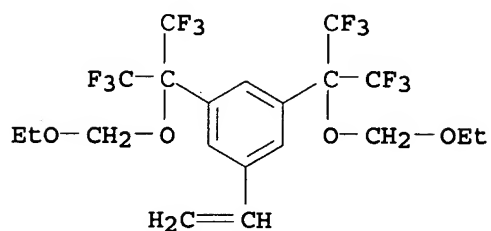
CMF C9 H14 O3 S



CM 2

CRN 585573-40-6

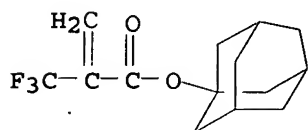
CMF C20 H20 F12 O4



CM 3

CRN 188739-82-4

CMF C14 H17 F3 O2



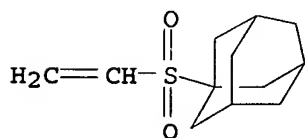
RN 634920-83-5 HCAPLUS

CM Tricyclo[3.3.1.1<sup>3,7</sup>]decane, 1-(ethenylsulfonyl)-, polymer with  
1-ethenyl-3,5-bis[1-(ethoxymethoxy)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

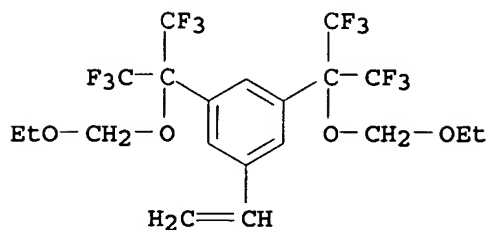
CRN 634920-74-4

CMF C12 H18 O2 S



CM 2

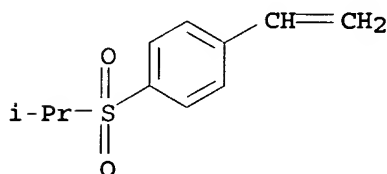
CRN 585573-40-6  
CMF C20 H20 F12 O4



RN 634920-89-1 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-ethenyl-4-[(1-methylethyl)sulfonyl]benzene (9CI)  
(CA INDEX NAME)

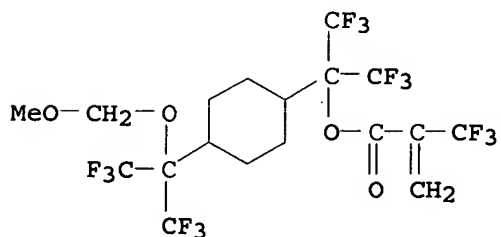
CM 1

CRN 634920-88-0  
CMF C11 H14 O2 S



CM 2

CRN 610301-02-5  
CMF C18 H17 F15 O4

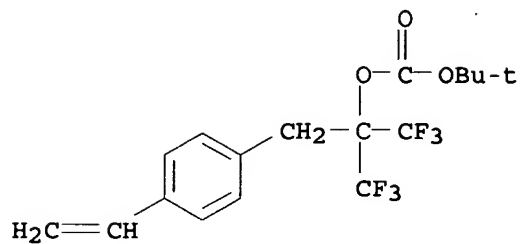


RN 634920-91-5 HCAPLUS  
CN Benzenesulfonic acid, 4-ethenyl ester, tricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl carbonate and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzeneethanol (9CI)  
(CA INDEX NAME)

CM 1

CRN 634920-90-4

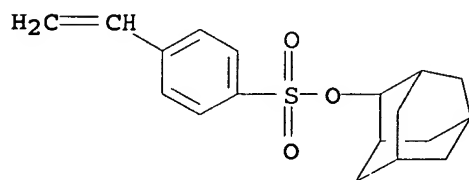
CMF C17 H18 F6 O3



CM 2

CRN 622840-86-2

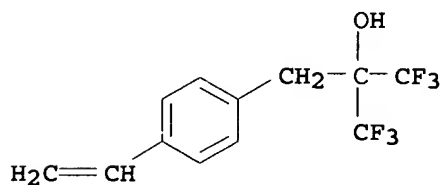
CMF C18 H22 O3 S



CM 3

CRN 557103-22-7

CMF C12 H10 F6 O



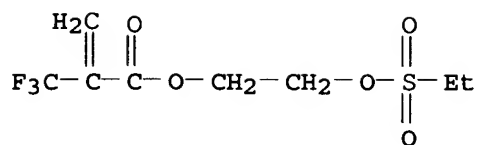
RN 634920-97-1 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-[(ethylsulfonyl)oxy]ethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 634920-96-0

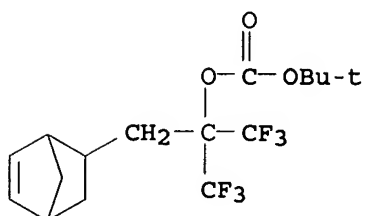
CMF C8 H11 F3 O5 S



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3



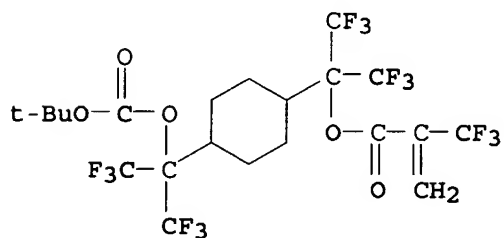
RN 634921-01-0 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 1-ethenyl-4-(methylsulfonyl)benzene and 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

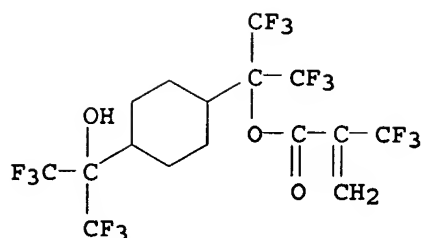
CMF C21 H21 F15 O5



CM 2

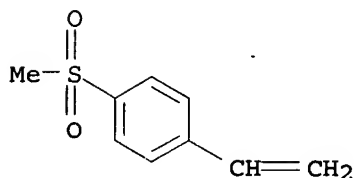
CRN 479072-83-8

CMF C16 H13 F15 O3



CM 3

CRN 97410-25-8  
CMF C9 H10 O2 S



IC ICM G03F007-039  
ICS G03F007-038  
INCL 430270100; 430287100; 430176000  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 622841-00-3P 622841-03-6P 622841-05-8P 634920-62-0P  
634920-65-3P 634920-67-5P 634920-69-7P 634920-72-2P  
634920-73-3P 634920-75-5P 634920-76-6P 634920-77-7P  
634920-79-9P 634920-80-2P 634920-82-4P  
634920-83-5P 634920-87-9P 634920-89-1P  
634920-91-5P 634920-93-7P 634920-95-9P  
634920-97-1P 634920-98-2P 634921-00-9P  
634921-01-0P  
(resin; pos. photoresist composition)

L18 ANSWER 48 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:890218 HCAPLUS  
DOCUMENT NUMBER: 139:388472  
TITLE: Chemically amplified positive photoresists for  
≤160 nm vacuum UV lithography  
INVENTOR(S): Kanna, Shinichi; Mizutani, Kazuyoshi; Sasaki,  
Tomoya  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003322972

A2

20031114

JP 2002-130718

2002

0502

PRIORITY APPLN. INFO.:

JP 2002-130718

2002

0502

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT

\*

AB The photoresists comprise (a) ionic compds. and nonionic compds. both generating acids by radiation, (b) polymers having repeating units chosen from I, II, CH<sub>2</sub>CCF<sub>3</sub>CO<sub>2</sub>R<sub>4a</sub>, III, CH<sub>2</sub>CR<sub>1a</sub>[C<sub>6</sub>H<sub>4</sub>[C(CR<sub>41</sub>R<sub>42</sub>R<sub>43</sub>)(CR<sub>44</sub>R<sub>45</sub>R<sub>46</sub>)OX]<sub>n</sub>], and IV (X, R<sub>3a</sub>, R<sub>4a</sub> = H, acid-labile group; R<sub>11</sub>-R<sub>16</sub>, R<sub>21</sub>-R<sub>32</sub>, R<sub>41</sub>-R<sub>46</sub>, R<sub>51</sub>-R<sub>56</sub> = H, F, fluoroalkyl, ≥1 of R<sub>11</sub>-R<sub>16</sub> ≠ H, ≥1 of R<sub>21</sub>-R<sub>32</sub> ≠ H, ≥1 of R<sub>41</sub>-R<sub>46</sub> ≠ H, ≥1 of R<sub>51</sub>-R<sub>56</sub> ≠ H; R<sub>1a</sub>, R<sub>2a</sub> = H, F, Cl, Br, cyano, CF<sub>3</sub>; m = 0, 1; n = 1-5), which increase solubility in alkaline developers by acids, and (c) solvents. The compns. show wide defocus latitude and defect-free patterns.

IT 143336-94-1P 370102-83-3P 607710-70-3P  
607710-71-4P 607710-72-5P 607710-76-9P  
607710-77-0P 610300-97-5P 610300-98-6P  
610301-00-3P 610301-01-4P 610301-03-6P  
(chemical amplified pos. photoresists for  
≤160 nm vacuum UV lithog.)

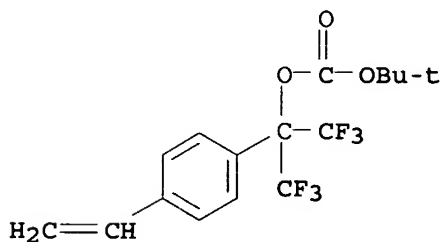
RN 143336-94-1 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl-α,α-bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

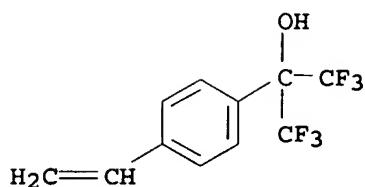
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



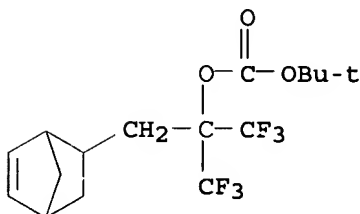
RN 370102-83-3 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

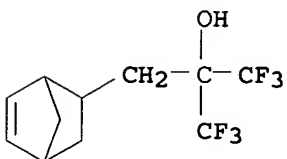
CMF C16 H20 F6 O3



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



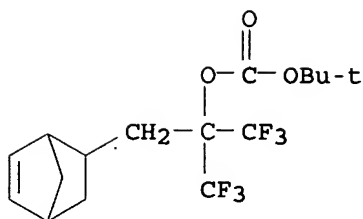
RN 607710-70-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 196314-63-3

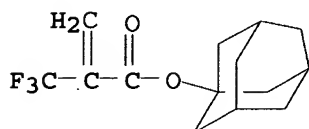
CMF C16 H20 F6 O3



CM 2

CRN 188739-82-4

CMF C14 H17 F3 O2



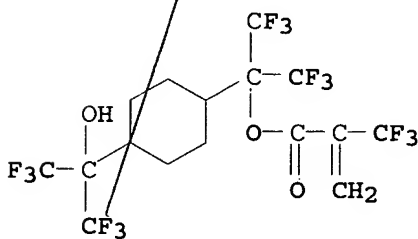
RN 607710-71-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-(2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl)cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

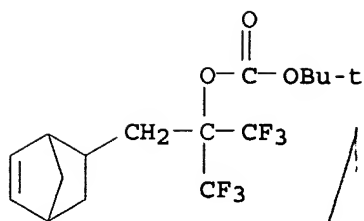
CMF C16 H13 F15 O3



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3



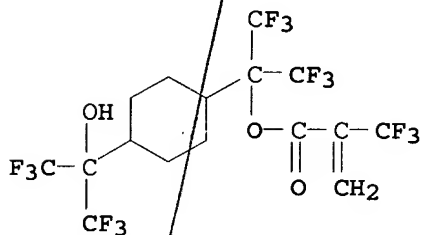
RN 607710-72-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

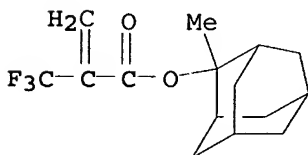
CMF C16 H13 F15 O3



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



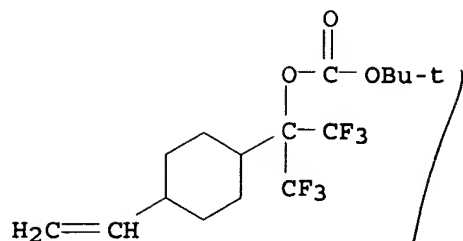
RN 607710-76-9 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylcyclohexyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 607710-75-8

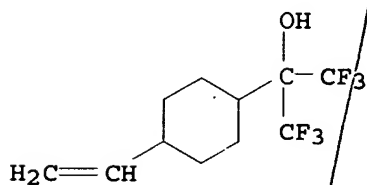
CMF C16 H22 F6 O3



CM 2

CRN 607710-74-7

CMF C11 H14 F6 O



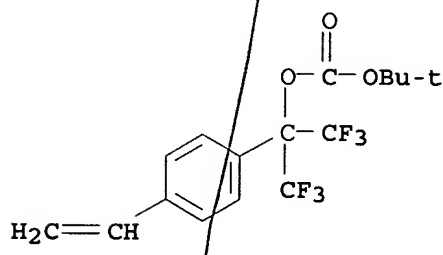
RN 607710-77-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

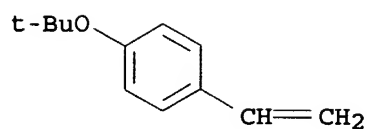
CMF C16 H16 F6 O3



CM 2

CRN 95418-58-9

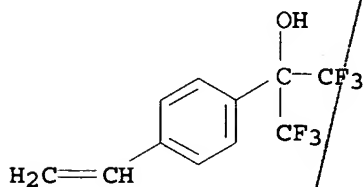
CMF C12 H16 O



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



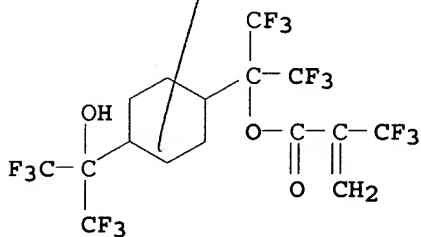
RN 610300-97-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 5-[2-(ethoxymethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

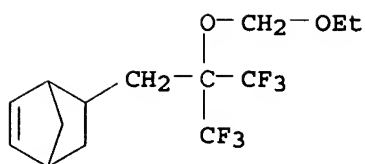
CMF C16 H13 F15 O3



CM 2

CRN 328114-61-0

CMF C14 H18 F6 O2



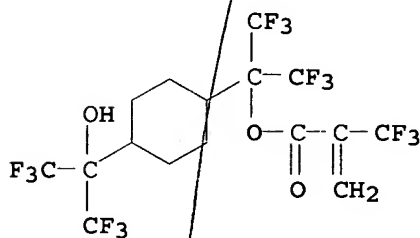
RN 610300-98-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

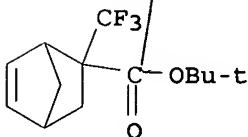
CMF C16 H13 F15 O3



CM 2

CRN 365568-55-4

CMF C13 H17 F3 O2



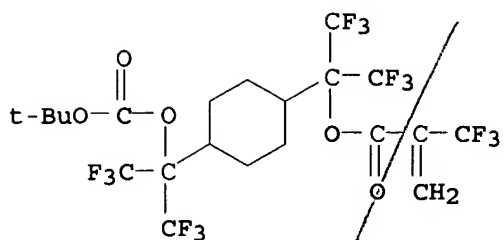
RN 610301-00-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with tricyclo[3.3.1.1.3,7]dec-1-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

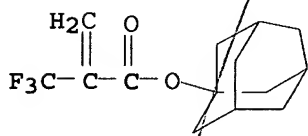
CMF C21 H21 F15 O5



CM 2

CRN 188739-82-4

CMF C14 H17 F3 O2



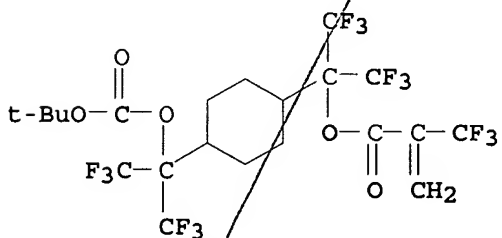
RN 610301-01-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

CMF C21 H21 F15 O5

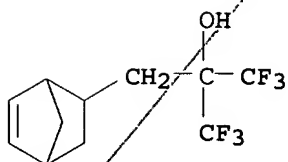


CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



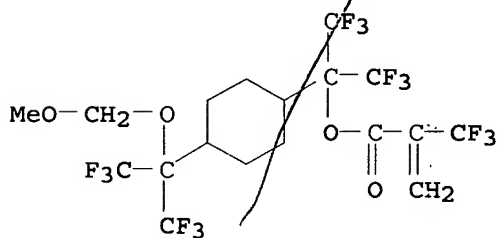


RN 610301-03-6 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610301-02-5

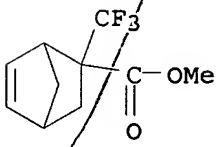
CMF C18 H17 F15 O4



CM 2

CRN 597581-42-5

CMF C10 H11 F3 O2



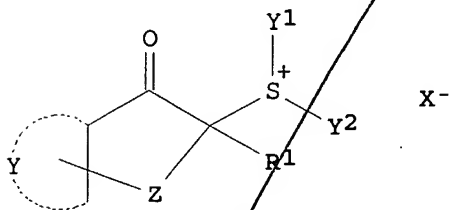
IC ICM G03F007-039  
 ICS C08F010-00; C08F012-22; C08F020-22; C08F020-26; C08F032-00; G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38  
 IT 143336-94-1P 370102-83-3P 370866-39-0P  
 406702-00-9P 430437-18-6P 459418-30-5P 607710-65-6P  
 607710-66-7P 607710-67-8P 607710-68-9P 607710-69-0P  
 607710-70-3P 607710-71-4P 607710-72-5P  
 607710-73-6P 607710-76-9P 607710-77-0P  
 607710-78-1P 610300-97-5P 610300-98-6P  
 610301-00-3P 610301-01-4P 610301-03-6P

(chemical amplified pos. photoresists for  
≤160 nm vacuum UV lithog.)

L18 ANSWER 49 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:834248 HCAPLUS  
DOCUMENT NUMBER: 139:330330  
TITLE: Chemically amplified photoresist compositions  
with high sensitivity and resolution  
INVENTOR(S): Kodama, Kunihiro  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 63 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003302754	A2	2003-10-24	JP 2002-110738	2002 0412
PRIORITY APPLN. INFO.:			JP 2002-110738	2002 0412

OTHER SOURCE(S): MARPAT 139:330330  
GI



I

AB The resist compns., useful for excimer laser development, contain photoacid generators I (R1 = H, alkyl, aryl, cyano; Y1, Y2 = alkyl, aryl, aralkyl, heteroring; Y = condensed aromatic group, heteroring; Z = single bond, divalent linking group; X- = nonnucleophilic anion).

IT 143336-94-1P 370102-83-3P 607710-70-3P  
607710-71-4P 607710-72-5P 607710-76-9P  
607710-77-0P 610300-97-5P 610300-98-6P  
610301-00-3P 610301-01-4P 610301-03-6P  
610301-04-7P

(sulfonium-based photoacid generators for excimer  
laser-sensitive photoresists with high sensitivity and resolution)

RN 143336-94-1 HCAPLUS

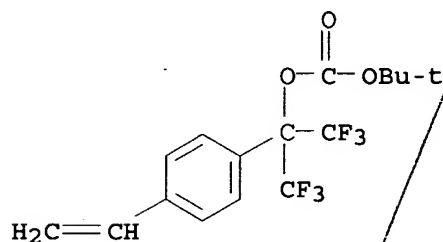
CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with

4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol  
(9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

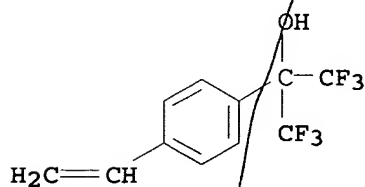
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



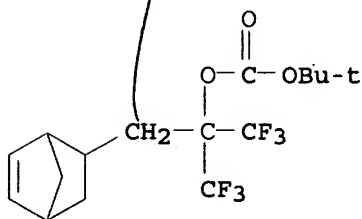
RN 370102-83-3 HCAPLUS

CN Carbonic acid, 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

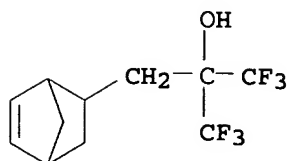
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CMF C16 H20 F6 O3



CM 2

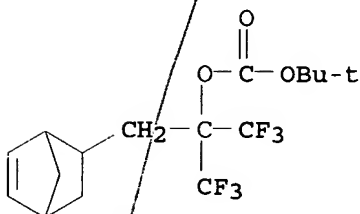
CRN 196314-61-1  
CMF C11 H12 F6 O



RN 607710-70-3 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

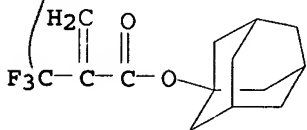
CM 1

CRN 196314-63-3  
CMF C16 H20 F6 O3



CM 2

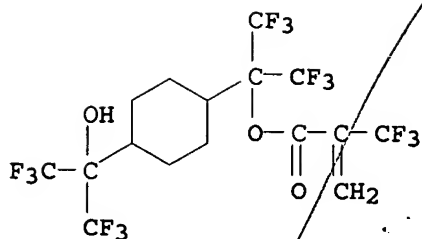
CRN 188739-82-4  
CMF C14 H17 F3 O2



RN 607710-71-4 HCAPLUS  
CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl 1,1-dimethylethyl carbonate (9CI) (CA INDEX NAME)

CM 1

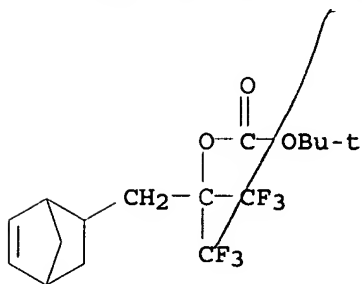
CRN 479072-83-8  
CMF C16 H13 F15 O3



CM 2

CRN 196314-63-3

CMF C16 H20 F6 O3



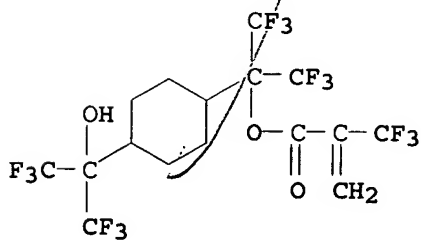
RN 607710-72-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

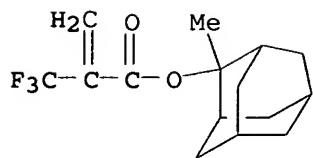
CMF C16 H13 F15 O3



CM 2

CRN 188739-86-8

CMF C15 H19 F3 O2



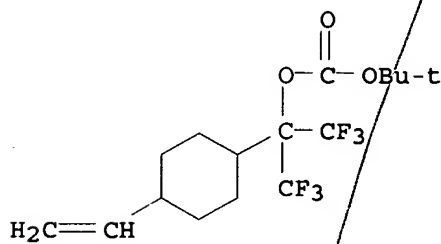
RN 607710-76-9 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylcyclohexyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)cyclohexanemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 607710-75-8

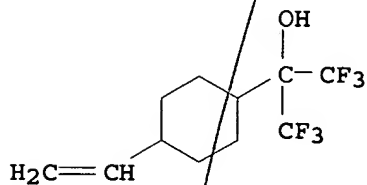
CMF C16 H22 F6 O3



CM 2

CRN 607710-74-7

CMF C11 H14 F6 O



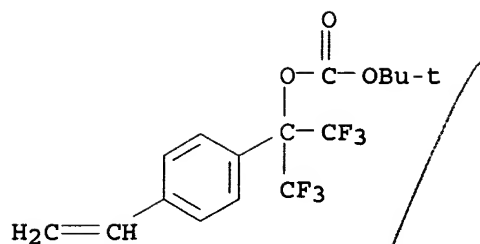
RN 607710-77-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

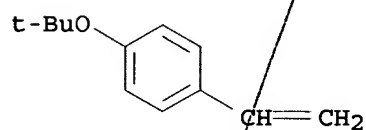
CMF C16 H16 F6 O3



CM 2

CRN 95418-58-9

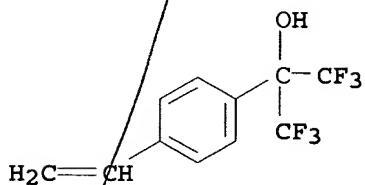
CMF C12 H16 O



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



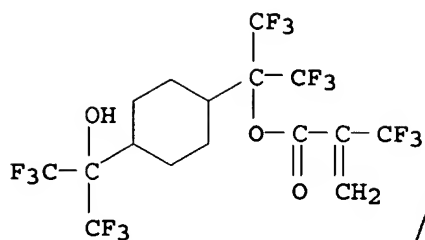
RN 610300-97-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2,2,2-trifluoro-1-[4-(2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl)cyclohexyl]-1-(trifluoromethyl)ethyl ester, polymer with 5-[2-(ethoxymethoxy)-3,3,3-trifluoro-2-(trifluoromethyl)propyl]bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

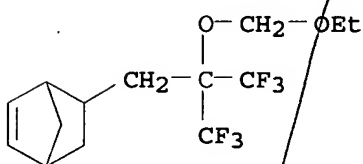
CMF C16 H13 F15 O3



CM 2

CRN 328114-61-0

CMF C14 H18 F6 O2



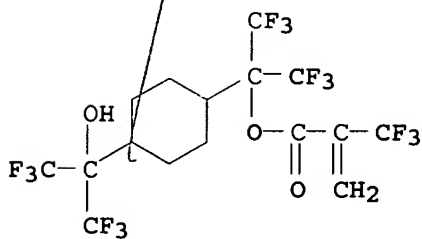
RN 610300-98-6 HCAPLUS

CM Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

CMF C16 H13 F15 O3

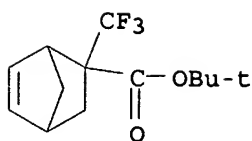


CM 2

CRN 365568-55-4

CMF C13 H17 F3 O2





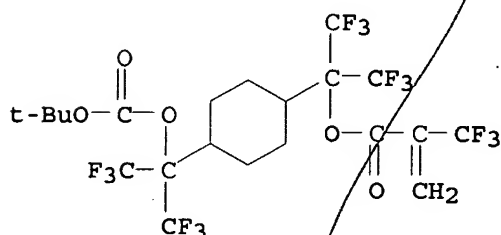
RN 610301-00-3 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with tricyclo[3.3.1.1.3,7]dec-1-yl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

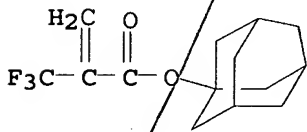
CMF C21 H21 F15 O5



CM 2

CRN 188739-82-4

CMF C14 H17 F3 O2



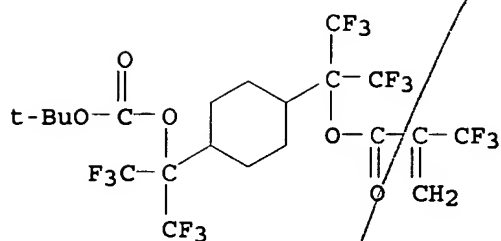
RN 610301-01-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1-[4-[1-[[[(1,1-dimethylethoxy)carbonyl]oxy]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl]cyclohexyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with  $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]hept-5-ene-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 610300-99-7

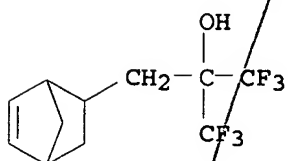
CMF C21 H21 F15 O5



CM 2

CRN 196314-61-1

CMF C11 H12 F6 O



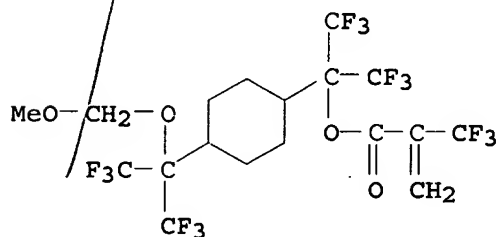
RN 610301-03-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-(trifluoromethyl)-, methyl ester, polymer with 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-(methoxymethoxy)-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 610301-02-5

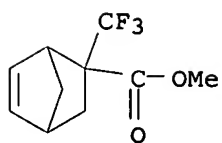
CMF C18 H17 F15 O4



CM 2

CRN 597581-42-5

CMF C10 H11 F3 O2



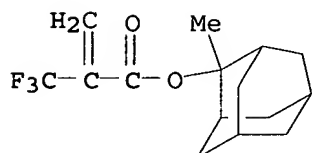
RN 610301-04-7 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1.3]dec-2-yl ester, polymer with 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl carbonate and 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 188739-86-8

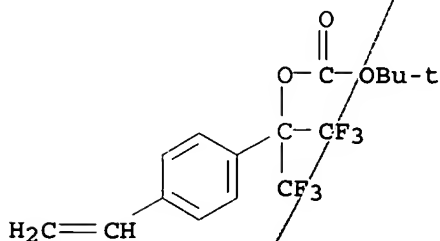
CMF C15 H19 F3 O2



CM 2

CRN 143336-93-0

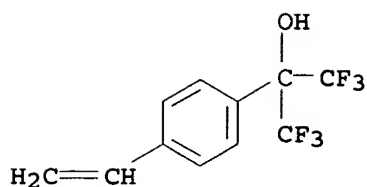
CMF C16 H16 F6 O3



CM 3

CRN 2386-82-5

CMF C11 H8 F6 O



IC ICM G03F007-004  
ICS G03F007-038; G03F007-039; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 109-92-2DP, Ethyl vinyl ether, ethers with hydroxystyrene homopolymer 24979-70-2DP, VP 15000, ethers with Et vinyl ether 129674-22-2P 143336-94-1P 159296-87-4P 177034-73-0P 177034-75-2P 199432-82-1P 200808-68-0P 228101-60-8P 250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 288620-13-3P 288620-15-5P 289623-64-9P 289706-85-0P 312620-54-5P 325143-38-2P 326591-96-2P 359635-35-1P 366808-82-4P 370102-83-3P 372968-15-5P 391232-36-3P 391613-77-7P 398140-38-0P 398140-43-7P 398140-45-9P 398140-59-5P 398140-68-6P 398140-69-7P 398140-77-7P 398140-80-2P 405509-19-5P 406702-00-9P 430437-18-6P 459418-30-5P 482609-97-2P 503003-65-4P 508210-04-6P 515876-73-0P 521303-15-1P 521303-16-2P 524699-47-6P 574735-94-7P 607710-65-6P 607710-66-7P 607710-67-8P 607710-68-9P 607710-69-0P 607710-70-3P 607710-71-4P 607710-72-5P 607710-73-6P 607710-76-9P 607710-77-0P 610300-92-0P 610300-96-4P 610300-97-5P 610300-98-6P 610301-00-3P 610301-01-4P 610301-03-6P 610301-04-7P 610301-05-8P 615278-33-6P 615278-35-8P 615278-38-1P  
(sulfonium-based photoacid generators for excimer laser-sensitive photoresists with high sensitivity and resolution)

L18 ANSWER 50 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:754897 HCAPLUS  
DOCUMENT NUMBER: 139:252537  
TITLE: Positive resist composition  
INVENTOR(S): Fujimori, Toru  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Eur. Pat. Appl., 89 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1347335	A1	20030924	EP 2003-6122	2003 0318

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2003270791 A2 20030925 JP 2002-74565

2002  
0318

US 2003224287 A1 20031204 US 2003-388408

2003  
0317

PRIORITY APPLN. INFO.:

JP 2002-74565

A

2002  
0318

AB A pos. photoresist composition used in fabrication of semiconductor devices comprises: (A) a compound capable of generating an acid on exposure to active light rays or a radiation; (B) a resin which is insol. or sparingly soluble in an alkali and becomes alkali-soluble by an action of an acid; and (C) an acyclic compound having at least three groups selected from a hydroxyl group and a substituted hydroxyl group.

IT 430436-70-7P 430436-81-0P 430436-85-4P

430436-91-2P 430436-94-5P 430437-04-0P

(pos. photoresist composition containing)

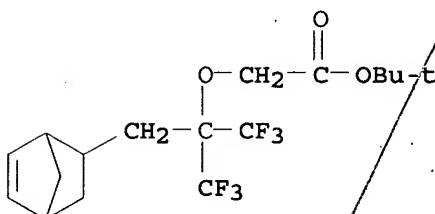
RN 430436-70-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-69-4

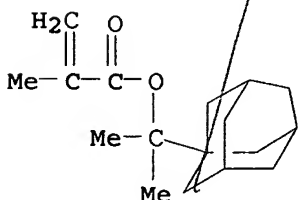
CMF C17 H22 F6 O3



CM 2

CRN 279218-76-7

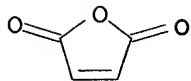
CMF C17 H26 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



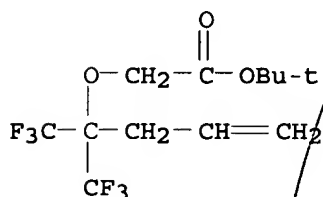
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-,  
1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and  
tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

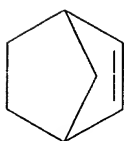
CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

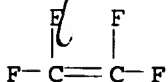
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



RN 430436-85-4 HCAPLUS

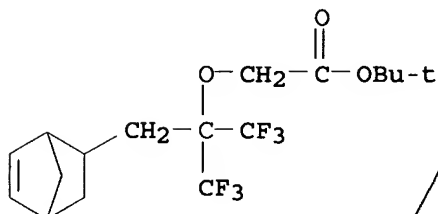
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-

trifluoro-1-(trifluoromethyl)ethoxy]acetate and  
1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-69-4

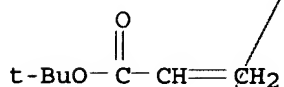
CMF C17 H22 F6 O3



CM 2

CRN 1663-39-4

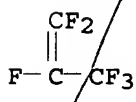
CMF C7 H12 O2



CM 3

CRN 116-15-4

CMF C3 F6



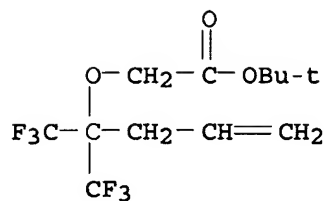
RN 430436-91-2 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene, 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

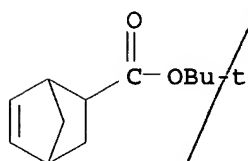
CMF C12 H16 F6 O3



CM 2

CRN 154970-45-3

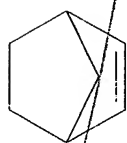
CMF C12 H18 O2



CM 3

CRN 498-66-8

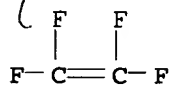
CMF C7 H10



CM 4

CRN 116-14-3

CMF C2 F4



RN 430436-94-5 HCAPLUS

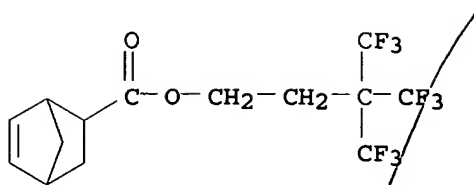
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl ester, polymer with 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-93-4



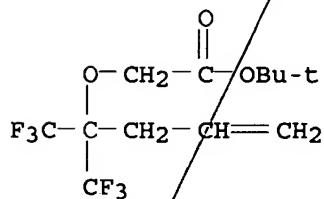
CMF C14 H13 F9 O2



CM 2

CRN 430436-80-9

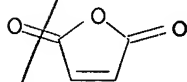
CMF C12 H16 F6 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



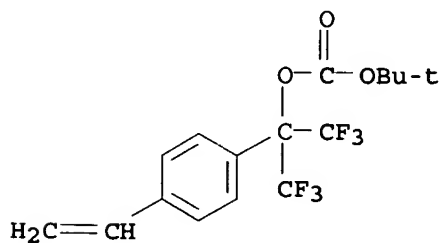
RN 430437-04-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

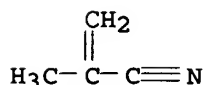
CMF C16 H16 F6 O3



CM 2

CRN 126-98-7

CMF C4 H5 N



IC ICM G03F007-039

ICS G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 109-92-2DP, Ethyl vinyl ether, reaction product with polyhydroxystyrene 24979-70-2DP, VP15000, reaction product with alkyl vinyl ether 159296-87-4P 200808-68-0P 250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl methacrylate copolymer 262617-13-0P 288303-55-9P 325143-38-2P 364736-22-1P 391232-36-3P 398140-43-7P 398140-45-9P 398140-47-1P 398140-50-6P 398140-52-8P 398140-55-1P 398140-57-3P 398140-59-5P 398140-64-2P 398140-69-7P 398140-73-3P 398140-77-7P 398140-78-8P 398140-79-9P 398140-81-3P 398140-88-0P, tert-Butyl norbornenecarboxylate-maleic anhydride-2-methyl-2-adamantyl acrylate-norbornene lactone acrylate copolymer 398140-89-1P 398140-94-8P 398141-00-9P 398141-11-2P 398141-13-4P 398141-14-5P 405509-18-4P 430436-66-1P 430436-67-2P 430436-68-3P 430436-70-7P 430436-72-9P 430436-74-1P 430436-76-3P 430436-78-5P 430436-79-6P 430436-81-0P 430436-82-1P 430436-84-3P 430436-85-4P 430436-86-5P 430436-87-6P 430436-89-8P 430436-90-1P 430436-91-2P 430436-92-3P 430436-94-5P 430436-95-6P 430436-97-8P 430436-98-9P 430436-99-0P 430437-01-7P 430437-03-9P 430437-04-0P 430437-05-1P 430437-09-5P 430437-11-9P 430437-12-0P 430437-13-1P 430437-14-2P 430437-15-3P 430437-17-5P 430437-18-6P 430437-19-7P 430437-21-1P 430437-24-4P 431062-12-3P 431062-14-5P 431062-16-7P 431062-17-8P 431062-18-9P 431062-20-3P 431062-22-5P 462109-80-4P 471257-28-0P 503003-64-3P 597553-03-2P 597553-04-3P

(pos. photoresist composition containing)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 51 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:735196 HCAPLUS

DOCUMENT NUMBER: 139:267983

TITLE: Positive-working photoresist composition containing polymer with fluoro-aliphatic group

INVENTOR(S): Fujimori, Toru

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 88 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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-----				
JP 2003262952	A2	20030919	JP 2002-65444	2002 0311

PRIORITY APPLN. INFO.: JP 2002-65444

AB The composition contains (A) a compound generating an acid by irradiation of actinic ray, (B) a resin which decomp. by the action of an acid and whose solubility in alkaline developer increases, and (C) a polymer with fluoro-aliphatic group formed from a monomer  $\text{CH}_2:\text{CR}_1\text{COX}(\text{CH}_2)_m(\text{CF}_2\text{CF}_2)_n\text{F}$  ( $\text{R}_1 = \text{H, Me}$ ;  $\text{X} = \text{O, S, NR}_2$ ;  $m = 1-6$ ;  $n = 2-4$ ;  $\text{R}_2 = \text{H, C1-4 alkyl}$ ). Developing defect is prevented and the composition is useful for manufacture of integrated circuits, semiconductor device, and wiring substrates.

IT 430436-70-7P 430436-81-0P 430436-85-4P  
430436-91-2P 430436-94-5P 430437-04-0P  
(pos. photoresist composition containing polymer  
with fluoro-aliphatic group)

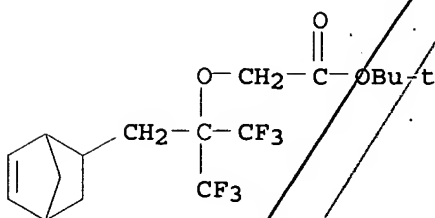
RN 430436-70-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-ethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-69-4

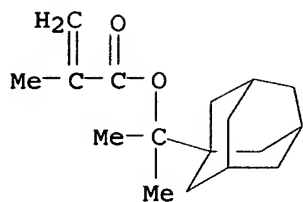
CMF C17 H22 F6 O3



CM 2

CRN 279218-76-7

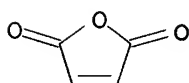
CMF C17 H26 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



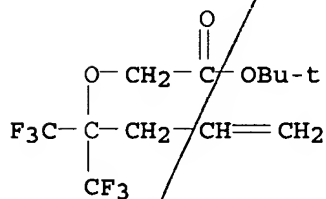
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-,  
1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and  
tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

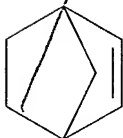
CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

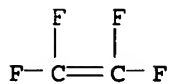
CMF C7 H10



CM 3

CRN 116-14-3

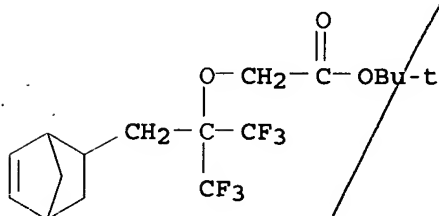
CMF C2 F4



RN 430436-85-4 HCAPLUS  
 CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-  
 trifluoro-1-(trifluoromethyl)ethoxy]acetate and  
 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

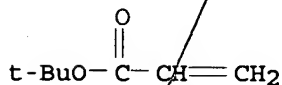
CM 1

CRN 430436-69-4  
 CMF C17 H22 F6 O3



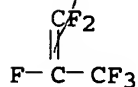
CM 2

CRN 1663-39-4  
 CMF C7 H12 O2



CM 3

CRN 116-15-4  
 CMF C3 F6

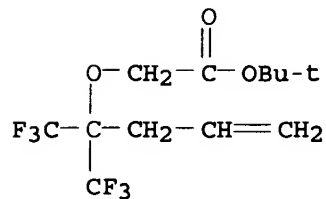


RN 430436-91-2 HCAPLUS  
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl  
 ester, polymer with bicyclo[2.2.1]hept-2-ene, 1,1-dimethylethyl  
 [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and  
 tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

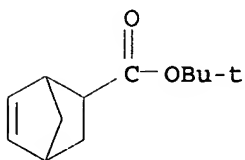
CMF C12 H16 F6 O3



CM 2

CRN 154970-45-3

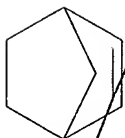
CMF C12 H18 O2



CM 3

CRN 498-66-8

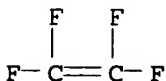
CMF C7 H10



CM 4

CRN 116-14-3

CMF C2 F4



RN 430436-94-5 HCAPLUS

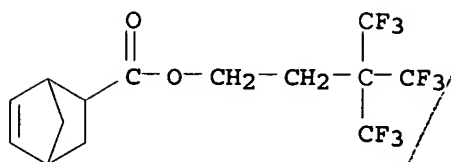
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl ester, polymer with 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and

2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-93-4

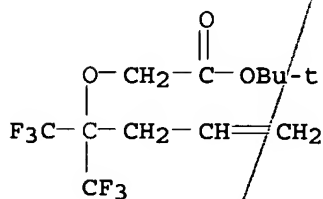
CMF C14 H13 F9 O2



CM 2

CRN 430436-80-9

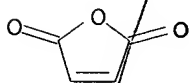
CMF C12 H16 F6 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



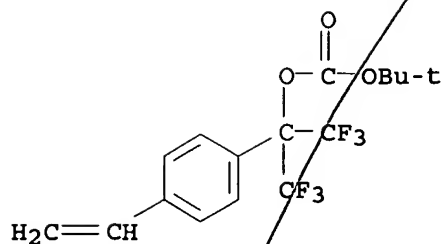
RN 430437-04-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

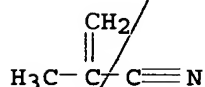
CMF C16 H16 F6 O3



CM 2

CRN 126-98-7

CMF C4 H5 N



IC ICM G03F007-004  
 ICS C08F020-22; C08F020-38; C08F020-54; C08F020-68; C08F020-70;  
 G03F007-033; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38

IT 250378-10-0P, Butyrolactone methacrylate-2-ethyl-2-adamantyl  
 methacrylate copolymer 262617-13-0P 328061-11-6P  
 350992-58-4P 351197-82-5P 359635-35-1P 364736-22-1P  
 367283-78-1P 391232-36-3P 398140-38-0P 398140-43-7P  
 398140-45-9P 398140-57-3P 398140-64-2P 398140-69-7P  
 398140-79-9P 398140-86-8P 398140-87-9P 398140-88-0P  
 398140-89-1P 398141-00-9P 398141-11-2P 398141-14-5P  
 430436-66-1P 430436-67-2P 430436-68-3P **430436-70-7P**  
 430436-72-9P 430436-74-1P 430436-76-3P 430436-78-5P  
 430436-79-6P **430436-81-0P** 430436-82-1P 430436-84-3P  
**430436-85-4P** 430436-86-5P 430436-87-6P 430436-89-8P  
 430436-90-1P **430436-91-2P** 430436-92-3P  
**430436-94-5P** 430436-95-6P 430436-97-8P 430436-98-9P  
 430436-99-0P 430437-01-7P 430437-03-9P **430437-04-0P**  
 430437-05-1P 430437-07-3P 430437-09-5P 430437-11-9P  
 430437-12-0P 430437-13-1P 430437-14-2P 430437-15-3P  
 430437-17-5P 430437-18-6P 430437-19-7P 430437-21-1P  
 430437-22-2P 430437-24-4P 431062-12-3P 431062-14-5P  
 431062-16-7P 431062-17-8P 431062-18-9P 431062-20-3P  
 431062-22-5P 482609-97-2P 503003-64-3P 524699-47-6P  
 532989-17-6P 601490-00-0P 601490-01-1P 601490-02-2P  
 601490-03-3P

(pos. photoresist composition containing polymer  
 with fluoro-aliphatic group)

L18 ANSWER 52 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:693996 HCAPLUS

DOCUMENT NUMBER: 139:221613

TITLE: Positive photoresists having high transparency  
 to 157-nm light, minimum edge roughness, and



INVENTOR(S): wide development latitude  
Mizutani, Kazuyoshi; Sasaki, Tomoya; Kanna,  
Shinichi  
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 46 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003248316	A2	20030905	JP 2002-49963	2002 0226
US 2003194641	A1	20031016	US 2003-372240	2003 0225
US 6811947	B2	20041102	JP 2002-49963	A 2002 0226

PRIORITY APPLN. INFO.: JP 2002-49963 A

AB The photoresists comprise (A) polymers  
[CH<sub>2</sub>CAQ1[C(CR1R2R3)(OR4R5R6)OL]<sub>n</sub>] [R1-R6 = H, F, (fluoro)alkyl,  
≥1 of them is F; L = H, acid-labile group; n = 1, 2; A = H,  
F, Cl, Me, CN, CF<sub>3</sub>; Q1 = partially hydrogenated benzene]  
increasing alkali solubility upon acid action, (B) radiation-curable  
acid generators, and (C) solvents.

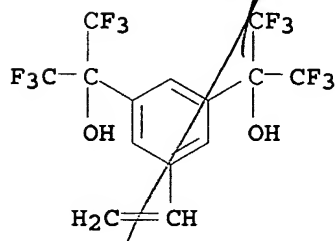
IT 585569-81-9DP, hydrogenated, tert-butoxycarboxylated  
585569-87-5DP, hydrogenated, tert-butoxycarboxylated  
(pos. photoresists containing saturated and  
butoxycarboxylated hydroxyalkylstyrene resins for F2 excimer  
laser lithog.)

RN 585569-81-9 HCAPLUS  
CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -  
tetrakis(trifluoromethyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

CMF C14 H8 F12 O2

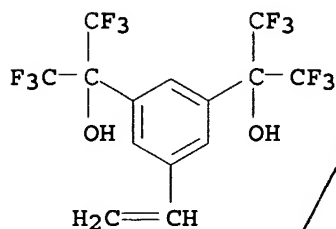


RN 585569-87-5 HCAPLUS  
CN 1,3-Benzenedimethanol, 5-ethenyl- $\alpha,\alpha,\alpha',\alpha'$ -  
tetrakis(trifluoromethyl)-, polymer with 4-ethenyl- $\alpha,\alpha$ -  
bis(trifluoromethyl)benzenemethanol (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

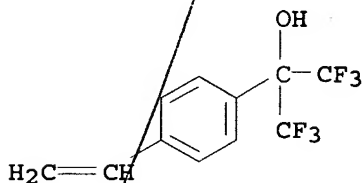
CMF C14 H8 F12 O2



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



IC ICM G03F007-039

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 116352-29-5DP, 4-(2-Hydroxyhexafluoroisopropyl)styrene

homopolymer, hydrogenated, tert-butoxycarboxylated

585569-81-9DP, hydrogenated, tert-butoxycarboxylated

585569-87-5DP, hydrogenated, tert-butoxycarboxylated

(pos. photoresists containing saturated and  
butoxycarboxylated hydroxyalkylstyrene resins for F2 excimer  
laser lithog.)

L18 ANSWER 53 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:582472 HCAPLUS

DOCUMENT NUMBER: 139:140963

TITLE: Positive resist compositions using  
fluorine-containing copolymersINVENTOR(S): Maeda, Kazuhiko; Komoritani, Haruhiko;  
Yamanaka, Kazuhiro

PATENT ASSIGNEE(S): Central Glass Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003212915	A2	20030730	JP 2002-10909	2002 0118

PRIORITY APPLN. INFO.:

JP 2002-10909

2002  
0118

AB The compns. comprise copolymers containing CH<sub>2</sub>:CR<sub>1</sub>CO<sub>2</sub>R<sub>2</sub> and CH<sub>2</sub>:CHOR<sub>3</sub> (R<sub>1</sub> = C1-4 fluoroalkyl; R<sub>2</sub> = H, linear or branched hydrocarbyl optionally containing F, halo, and/or O; R<sub>2</sub> partially contains acid-unstable group; R<sub>3</sub> = aromatic or alicyclic hydrocarbon-containing ring, linear or branched hydrocarbyl optionally containing F, halo, and/or O) and acid generators. The compns. show high transparency at the region from vacuum UV to visible light, adhesion to substrates, and film formability.

IT 568587-24-6P 568587-27-9P

(pos. resist compns. using fluoroalkyl acrylate-vinyl ether copolymers and acid generators for high transparency)

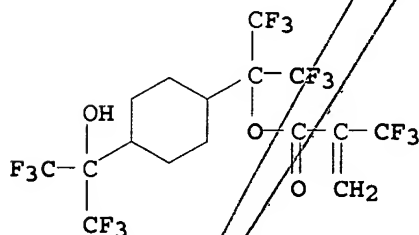
RN 568587-24-6 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 1,1-dimethylethyl ester, polymer with (ethenyloxy)cyclohexane and 2,2,2-trifluoro-1-[4-[2,2,2-trifluoro-1-hydroxy-1-(trifluoromethyl)ethyl]cyclohexyl]-1-(trifluoromethyl)ethyl 2-(trifluoromethyl)-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 479072-83-8

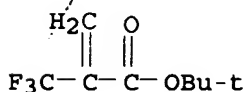
CMF C16 H13 F15 O3



CM 2

CRN 105935-24-8

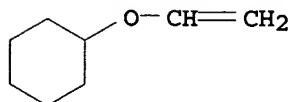
CMF C8 H11 F3 O2



CM 3

CRN 2182-55-0

CMF C8 H14 O



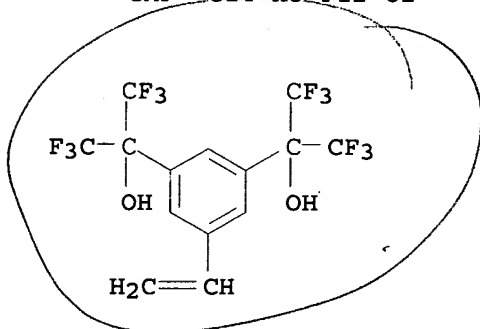
RN 568587-27-9 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 2-methyltricyclo[3.3.1.1<sup>3,7</sup>]dec-2-yl ester, polymer with 1-(ethenyloxy)-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane and 5-ethenyl- $\alpha,\alpha,\alpha'$ ,.alph a.'-tetrakis(trifluoromethyl)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 568587-26-8

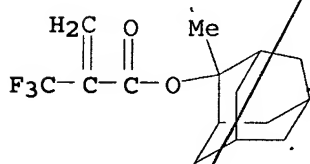
CMF C14 H8 F12 O2



CM 2

CRN 188739-86-8

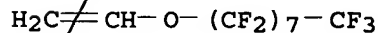
CMF C15 H19 F3 O2



CM 3

CRN 60321-80-4

CMF C10 H3 F17 O



IC ICM C08F002-44  
 ICS C08F261-06; G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 37  
 IT 568587-22-4P, tert-Butyl  $\alpha$ -trifluoromethylmethacrylate-trifluoroethyl  $\alpha$ -trifluoromethylmethacrylate-trifluoroethyl vinyl ether copolymer 568587-23-5P **568587-24-6P**  
 568587-25-7P **568587-27-9P** 568587-28-0P 568587-29-1P  
 568587-30-4P  
 (pos. resist compns. using fluoroalkyl acrylate-vinyl ether copolymers and acid generators for high transparency)

L18 ANSWER 54 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:371833 HCAPLUS

DOCUMENT NUMBER: 138:376421

TITLE: Chemically amplified positive resists forming defect-free patterns by deep-UV lithography using F2 excimer lasers

INVENTOR(S): Fujimori, Toru; Kanna, Shinichi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 55 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

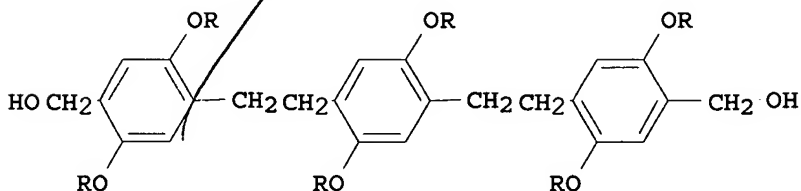
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003140345	A2	20030514	JP 2001-338103	2001 1102

PRIORITY APPLN. INFO.: JP 2001-338103

2001  
1102

GI



AB The resists comprise acid-labile F-containing resins, radiation-sensitive acid generators, and F-containing compds.

IT **430436-81-0P**

(chemical amplified pos. resists containing F-substituted acid-labile polymers and F compds. for deep-UV lithog.)

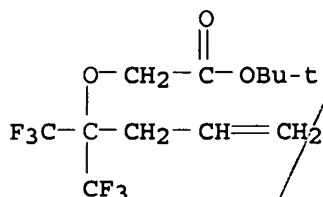
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

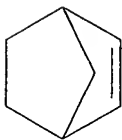
CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

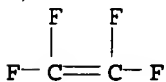
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



IT 430436-85-4

(chemical amplified pos. resists containing F-substituted acid-labile polymers and F compds. for deep-UV lithog.)

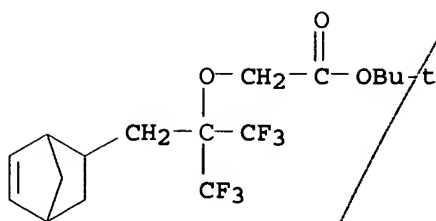
RN 430436-85-4 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-69-4

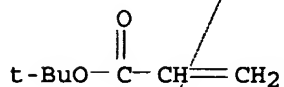
CMF C17 H22 F6 O3



CM 2

CRN 1663-39-4

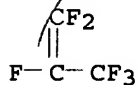
CMF C7 H12 O2



CM 3

CRN 116-15-4

CMF C3 F6



IC ICM G03F007-039

ICS G03F007-004; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 109-92-2DP, Ethyl vinyl ether, reaction products with hydroxymethyl-containing styrene polymers 430436-66-1P

430436-68-3P 430436-79-6P 430436-81-0P 430437-14-2P

431062-12-3P 462109-80-4DP, reaction products with Et vinyl ether

(chemical amplified pos. resists containing

F-substituted acid-labile polymers and F compds. for deep-UV lithog.)

IT 430436-67-2 430436-84-3 430436-85-4 430436-89-8

430436-90-1 431062-14-5 431062-16-7 431062-18-9

431062-20-3 431062-22-5

(chemical amplified pos. resists containing

F-substituted acid-labile polymers and F compds. for deep-UV lithog.)

L18 ANSWER 55 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:369197 HCAPLUS

DOCUMENT NUMBER: 138:393073

TITLE: Positive-working photoresist composition containing fluoro-substituted nitrogen

INVENTOR(S): compound  
 Fujimori, Toru; Kanna, Shinichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 53 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003140349	A2	20030514	JP 2001-339439	2001 1105

PRIORITY APPLN. INFO.:

JP 2001-339439

2001  
1105

AB The composition contains (A) a polymer with F-substituted main chain or side chain and becomes soluble in alkaline developer by the decomposition caused by an acid, (B) a compound generating acid by actinic ray or radiation, and (C) a nitrogen compound containing  $\geq 1$  F atom. The composition gives clear pattern without development defect.

IT 430436-70-7P 430436-81-0P 430436-85-4P  
 430436-94-5P 430437-04-0P 524952-65-6P  
 524952-68-9P

(pos. photoresist containing F-containing  
 alkali-soluble polymer, acid generator, and F-containing nitrogen  
 compound)

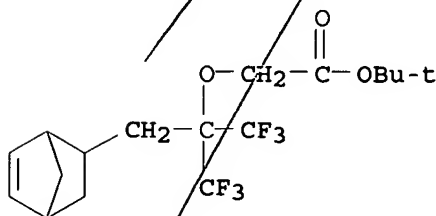
RN 430436-70-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-  
 ylethyl ester, polymer with 1,1-dimethylethyl [1-  
 (bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-  
 (trifluoromethyl)ethoxy]acetate and 2,5-furandione (9CI) (CA  
 INDEX NAME)

CM 1

CRN 430436-69-4

CMF C17 H22 F6 O3

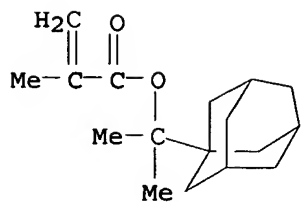


CM 2

CRN 279218-76-7

CMF C17 H26 O2

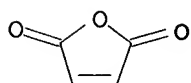




CM 3

CRN 108-31-6

CMF C4 H2 O3



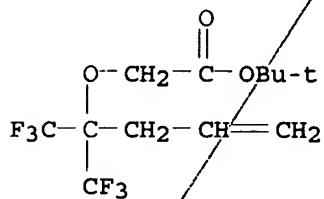
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-,  
1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and  
tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

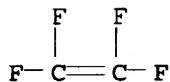
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



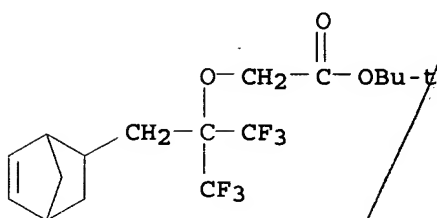
RN 430436-85-4 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-  
trifluoro-1-(trifluoromethyl)ethoxy]acetate and  
1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-69-4

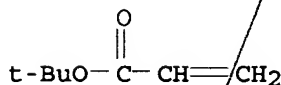
CMF C17 H22 F6 O3



CM 2

CRN 1663-39-4

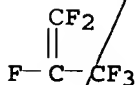
CMF C7 H12 O2



CM 3

CRN 116-15-4

CMF C3 F6



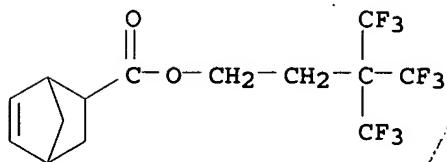
RN 430436-94-5 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 4,4,4-trifluoro-3,3-  
bis(trifluoromethyl)butyl ester, polymer with 1,1-dimethylethyl  
[[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and  
2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-93-4

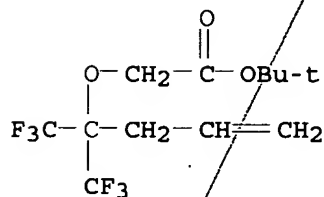
CMF C14 H13 F9 O2



CM 2

CRN 430436-80-9

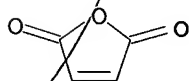
CMF C12 H16 F6 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



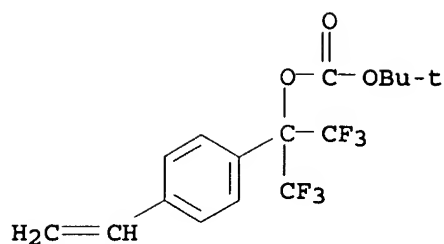
RN 430437-04-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

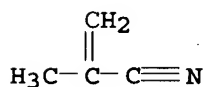
CMF C16 H16 F6 O3



CM 2

CRN 126-98-7

CMF C4 H5 N



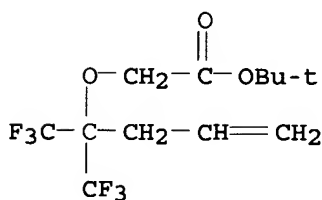
RN 524952-65-6 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

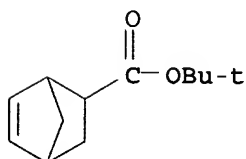
CMF C12 H16 F6 O3



CM 2

CRN 154970-45-3

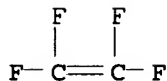
CMF C12 H18 O2



CM 3

CRN 116-14-3

CMF C2 F4



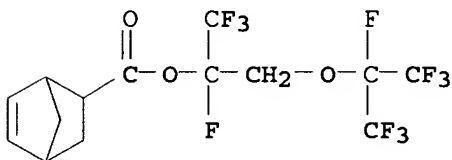
RN 524952-68-9 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,2,2,2-tetrafluoro-1-  
[[1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethoxy]methyl]ethyl  
ester, polymer with 2-[1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-  
2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]tetrahydro-2H-pyran and  
1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 524952-67-8

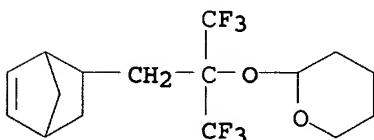
CMF C14 H11 F11 O3



CM 2

CRN 430436-65-0

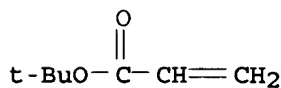
CMF C16 H20 F6 O2



CM 3

CRN 1663-39-4

CMF C7 H12 O2



IC ICM G03F007-039

ICS C08F012-22; C08F014-26; C08F014-28; C08F016-26; C08F016-38;

C08F020-22; C08F020-28; C08F020-44; C08F032-04; G03F007-004;  
H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

Section cross-reference(s): 38

IT 143643-34-9P 262617-13-0P 370866-13-0P 370866-15-2P  
397302-29-3P 430436-67-2P 430436-68-3P **430436-70-7P**  
430436-72-9P 430436-74-1P 430436-76-3P 430436-78-5P  
430436-79-6P **430436-81-0P** 430436-82-1P 430436-84-3P  
**430436-85-4P** 430436-86-5P 430436-87-6P 430436-89-8P  
430436-90-1P 430436-92-3P **430436-94-5P** 430436-98-9P  
430436-99-0P 430437-01-7P 430437-03-9P **430437-04-0P**  
430437-05-1P 430437-09-5P 430437-11-9P 430437-12-0P  
430437-13-1P 430437-17-5P 430437-18-6P 430437-19-7P  
430437-21-1P 430437-22-2P 430437-24-4P 430437-27-7P  
430437-29-9P 430437-33-5P 430437-36-8P 430437-37-9P  
430437-39-1P 430437-40-4P 431062-12-3P 431062-14-5P  
431062-16-7P 431062-17-8P 431062-18-9P 431062-20-3P  
431062-22-5P 487048-93-1P **524952-65-6P** 524952-66-7P  
**524952-68-9P** 524952-69-0P 524952-70-3P 524952-71-4P  
524952-72-5P 524952-73-6P 524952-74-7P

(pos. photoresist containing F-containing  
alkali-soluble polymer, acid generator, and F-containing nitrogen  
compound)

L18 ANSWER 56 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:241052 HCAPLUS

DOCUMENT NUMBER: 138:262693

TITLE: Positive photoresist composition

INVENTOR(S): Fujimori, Toru; Kawabe, Yasumasa

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 101 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1296190	A1	20030626	EP 2002-21204	2002 0918
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2003167333	A2	20030613	JP 2002-563	2002 0107
US 2003134225	A1	20030717	US 2002-244070	2002 0916
PRIORITY APPLN. INFO.:			JP 2001-285180	A 2001 0919
			JP 2002-563	A 2002 0107

AB A pos. resist composition comprises the components of: (A) a compound capable of generating an acid upon irradiation with one of an actinic ray and a radiation; (B) a resin that is insol. or slightly soluble in alkalis, but becomes alkali-soluble under an action of an acid; (C) a basic compound; and (D) a compound comprising at least three hydroxyl groups or at least three substituted hydroxyl groups, and comprising at least one cyclic structure. The present invention relates to a pos. resist composition used in a process of manufacture semiconductors and which far UV light with wavelengths  $\leq$  250 nm is used as an exposure light source or an electron beam is used as an irradiation source.

IT 430436-70-7P 430436-81-0P 430436-85-4P  
430436-91-2P 430436-94-5P

(pos. photoresist composition containing)

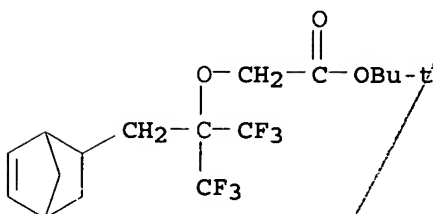
RN 430436-70-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-69-4

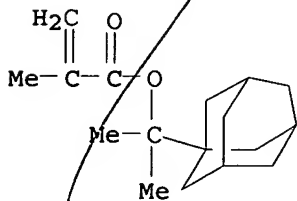
CMF C17 H22 F6 O3



CM 2

CRN 279218-76-7

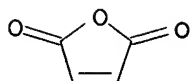
CMF C17 H26 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



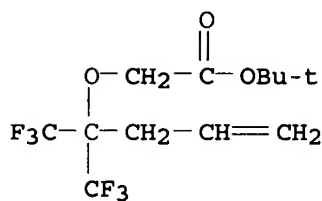
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

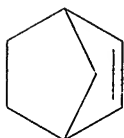
CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

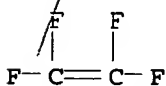
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



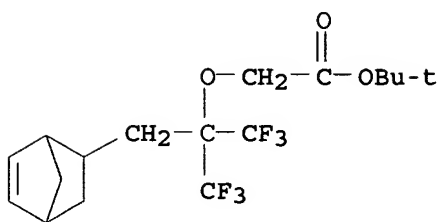
RN 430436-85-4 HCAPLUS

CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethoxy]acetate and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

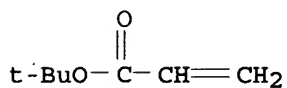


CRN 430436-69-4  
CMF C17 H22 F6 O3



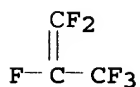
CM 2

CRN 1663-39-4  
CMF C7 H12 O2



CM 3

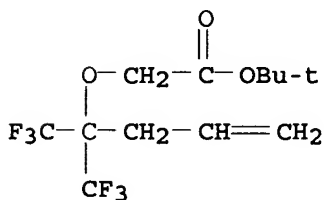
CRN 116-15-4  
CMF C3 F6



RN 430436-91-2 HCAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene, 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

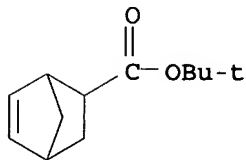
CRN 430436-80-9  
CMF C12 H16 F6 O3



CM 2

CRN 154970-45-3

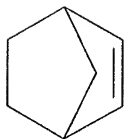
CMF C12 H18 O2



CM 3

CRN 498-66-8

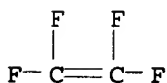
CMF C7 H10



CM 4

CRN 116-14-3

CMF C2 F4



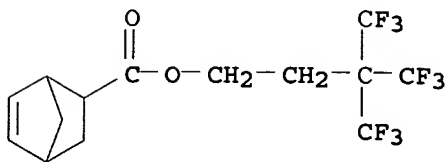
RN 430436-94-5 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl ester, polymer with 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-93-4

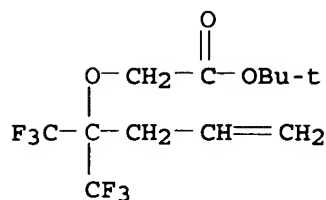
CMF C14 H13 F9 O2



CM 2

CRN 430436-80-9

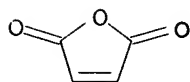
CMF C12 H16 F6 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 76

IT 24979-70-2DP, VP15000, reaction product with Et vinyl ether

129674-22-2P 159296-87-4P 177034-73-0P 177034-75-2P

199432-82-1P 200808-68-0P 228101-60-8P 250378-10-0P,

Butyrolactone methacrylate-2-ethyl-2-adamantylmethacrylate  
copolymer 262617-13-0P 288303-55-9P 288620-13-3P

288620-15-5P 289706-85-0P 325143-38-2P 326591-96-2P

364736-22-1P 372968-15-5P 391232-36-3P 398140-38-0P

398140-43-7P 398140-45-9P 398140-47-1P 398140-50-6P

398140-52-8P 398140-55-1P 398140-57-3P 398140-59-5P

398140-64-2P 398140-69-7P 398140-73-3P 398140-77-7P

398140-78-8P 398140-79-9P 398140-81-3P 398140-86-8P

398140-87-9P 398140-88-0P 398140-89-1P 398140-94-8P

398141-00-9P 398141-11-2P 398141-13-4P 398141-14-5P

405509-18-4P 430436-66-1P 430436-67-2P 430436-68-3P

**430436-70-7P** 430436-72-9P 430436-74-1P 430436-76-3P430436-78-5P 430436-79-6P **430436-81-0P** 430436-82-1P430436-84-3P **430436-85-4P** 430436-86-5P 430436-87-6P430436-89-8P 430436-90-1P **430436-91-2P** 430436-92-3P**430436-94-5P** 430436-95-6P 430436-97-8P 430436-98-9P

430436-99-0P 430437-09-5P 430437-11-9P 430437-12-0P

430437-13-1P 430437-14-2P 430437-15-3P 430437-17-5P

430437-18-6P 430437-19-7P 430437-21-1P 430437-22-2P

430437-24-4P 431062-12-3P 431062-14-5P 431062-16-7P

431062-17-8P 503003-64-3P 503003-65-4P

(pos. photoresist composition containing)

REFERENCE COUNT:

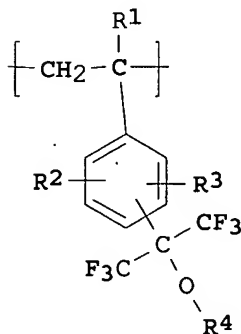
5

THERE ARE 5 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L18 ANSWER 57 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:40248 HCAPLUS  
 DOCUMENT NUMBER: 138:115049  
 TITLE: Chemically amplified positive photoresist  
 fluoropolymer compositions with high  
 resolution and transparency to F2 excimer  
 laser beams, and their deposition method  
 INVENTOR(S): Kanna, Shinichi; Mizutani, Kazuyoshi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003015301	A2	20030117	JP 2001-203565	2001 0704
PRIORITY APPLN. INFO.:			JP 2001-203565	2001 0704

GI



AB The compns. comprise (A) fluoropolymers, which increase their alkali-solubility in the presence of acids, having repeating units I (R1 = H, F, alkyl; R2, R3 = H, OH, halo, cyano, alkoxy, aryl, etc.; R4 = H, alkyl, acyl, R5R6COR7, etc.; R5, R6 = H, alkyl, cycloalkyl; R7 = alkyl, cycloalkyl, aralkyl, aryl), (B) photoacid generators, and (C) solvents, wherein the compns. are heated at 110-150° in deposition.

IT 462109-95-1P 487048-82-8P

(F-containing styrene polymers for chemical amplified pos. photoresists with high resolution and transparency to F2 excimer laser beams)

RN 462109-95-1 HCAPLUS

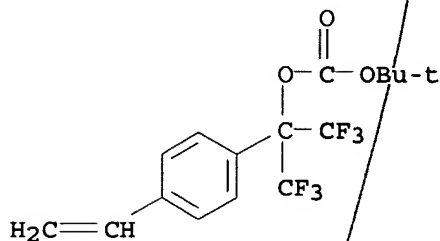
CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol and

2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

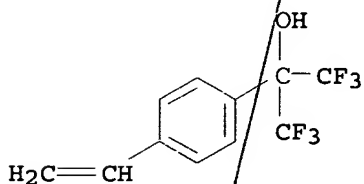
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

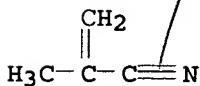
CMF C11 H8 F6 O



CM 3

CRN 126-98-7

CMF C4 H5 N



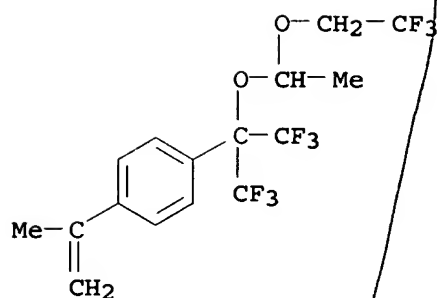
RN 487048-82-8 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 2,2,2-trifluoro-1-[4-(1-methylethenyl)phenyl]-1-(trifluoromethyl)ethyl ester, polymer with 1-(1-methylethenyl)-4-[2,2,2-trifluoro-1-[1-(2,2,2-trifluoroethoxy)ethoxy]-1-(trifluoromethyl)ethyl]benzene and 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 462109-90-6

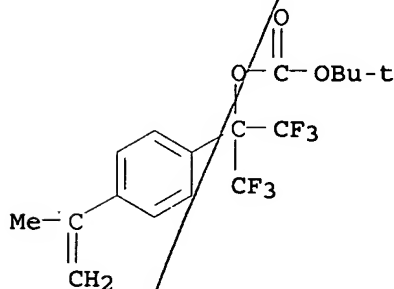
CMF C16 H15 F9 O2



CM 2

CRN 370569-98-5

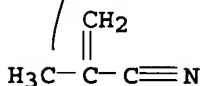
CMF C17 H18 F6 O3



CM 3

CRN 126-98-7

CMF C4 H5 N



IC ICM G03F007-039

ICS C08F012-14; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 109-92-2DP, Ethyl vinyl ether, ethers with F-containing acrylic styrene polymers 370866-15-2P 397302-29-3P 430437-01-7DP, ethers with Et vinyl ether 430437-07-3P 462109-81-5P 462109-83-7P 462109-85-9P 462109-89-3P 462109-91-7P 462109-95-1P 487048-75-9P 487048-76-0P 487048-77-1P 487048-78-2P 487048-79-3P 487048-81-7P 487048-82-8P 487048-83-9P 487048-85-1P 487048-86-2P 487048-87-3P 487048-88-4P 487048-89-5P 487048-90-8P 487048-92-0P 487048-93-1P 487048-94-2P 487048-95-3P

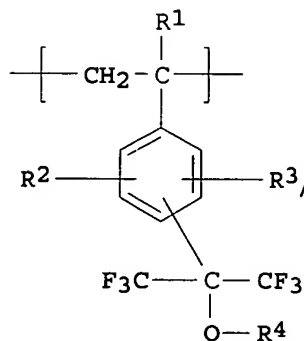
(F-containing styrene polymers for chemical amplified pos. photoresists with high resolution and transparency to F2)

excimer laser beams)

L18 ANSWER 58 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:734053 HCAPLUS  
 DOCUMENT NUMBER: 137:270514  
 TITLE: Positive resist composition containing resin  
 and photoacid generator  
 INVENTOR(S): Aoai, Toshiaki; Mizutani, Kazuyoshi; Kanna,  
 Shinichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 51 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1243968	A2	20020925	EP 2002-6528	2002 0319
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002351081	A2	20021204	JP 2002-74337	2002 0318
US 2002168584	A1	20021114	US 2002-99981	2002 0319
PRIORITY APPLN. INFO.:			JP 2001-79184	A 2001 0319

GI



I

AB The present invention relates to a pos. resist composition used in micro-lithog processes for the manufacture of VLSI's and micro-tips

with large capacities. The present invention relates to a pos. resist composition capable of forming fine patterns with use of a vacuum UV ray having a wavelength of < 160 nm. A pos. resist composition comprises: (A) a resin containing a specified repeating unit I (R1 = H, halogen atom, cyano group, alkyl; R2,3 = H, hydroxy group, halogen atom, cyano, alkoxy, acyl, alkyl, cycloalkyl, alkenyl, aralkyl, aryl; R4 = H, alkyl, perfluoroalkyl, cycloalkyl, acyl, alkoxyacrbonyl, etc.), which is capable of decomposing by the action of an acid to increase the solubility in an alkali developer; and (B) a compound capable of generating an acid upon irradiation with one of an actinic ray and a radiation.

IT 462109-87-1P 462109-92-8P 462109-95-1P  
(resin and acid generator for pos. resist composition)

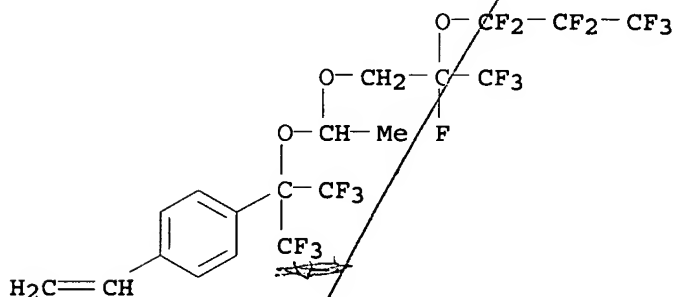
RN 462109-87-1 HCAPLUS

CN 2-Butenedinitrile, (2Z)-, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol and 1-ethenyl-4-[2,2,2-trifluoro-1-[1-[2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propoxy]ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 462109-86-0

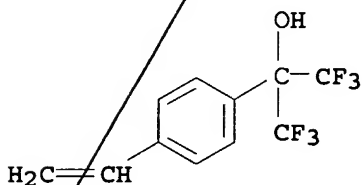
CMF C19 H13 F17 O3



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



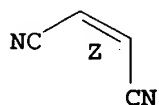
CM 3

CRN 928-53-0



CMF C4 H2 N2

Double bond geometry as shown.



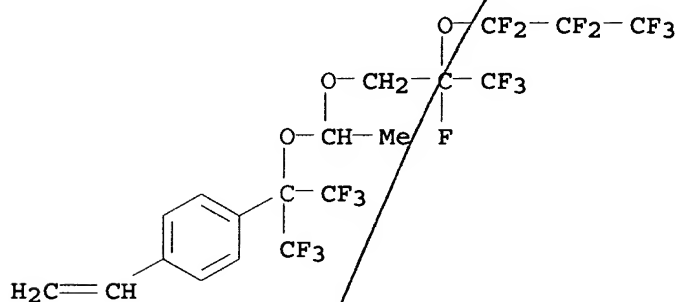
RN 462109-92-8 HCAPLUS

CN Benzenemethanol, 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)-, polymer with 1-ethenyl-4-[2,2,2-trifluoro-1-[1-[2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propoxy]ethoxy]-1-(trifluoromethyl)ethyl]benzene (9CI) (CA INDEX NAME)

CM 1

CRN 462109-86-0

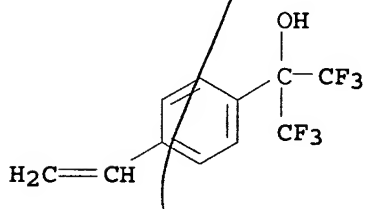
CMF C19 H13 F17 O3



CM 2

CRN 2386-82-5

CMF C11 H8 F6 O



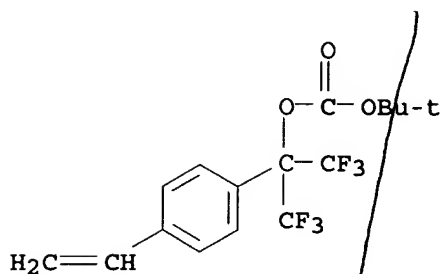
RN 462109-95-1 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 4-ethenyl- $\alpha,\alpha$ -bis(trifluoromethyl)benzenemethanol and 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

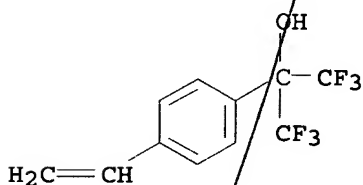
CMF C16 H16 F6 O3



CM 2

CRN 2386-82-5

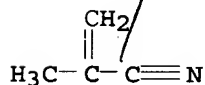
CMF C11 H8 F6 O



CM 3

CRN 126-98-7

CMF C4 H5 N



IC ICM G03F007-004

ICS G03F007-039

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

IT 430437-07-3P 462109-80-4DP, reaction products with Et vinyl ether 462109-81-5P 462109-83-7P 462109-85-9P

462109-87-1P 462109-89-3P 462109-91-7P

462109-92-8P 462109-94-0P 462109-95-1P

462109-97-3P

(resin and acid generator for pos. resist composition)

L18 ANSWER 59 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:716633 HCAPLUS

DOCUMENT NUMBER: 137:255345

TITLE: Photolithographic fine pattern formation method based on resist compositions containing

INVENTOR(S): photo-acid generators and fluoropolymers.  
Naito, Takuya; Ishikawa, Seiichi; Toriumi,  
Minoru; Miyoshi, Seiro; Yamazaki, Tamio;  
Watanabe, Manabu; Itani, Toshiro; Araki,  
Takayuki; Ishikawa, Takuyi; Koh, Meiten  
PATENT ASSIGNEE(S): Semiconductor Leading Edge Technologies, Inc.,  
Japan; Daikin Industries, Ltd.  
SOURCE: PCT Int. Appl., 86 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002073316	A1	20020919	WO 2002-JP1697	2002 0226
W: JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1376230	A1	20040102	EP 2002-700770	2002 0226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2004101787	A1	20040527	US 2003-471050	2003 0908
PRIORITY APPLN. INFO.:				
			JP 2001-67674	A 2001 0309
			WO 2002-JP1697	W 2002 0226

AB Photolithog. fine pattern formation method comprises a step of forming a photosensitive layer on a substrate or on a specified layer on the substrate by using at least a compound producing an acid on light irradiation and a photosensitive composition including a fluorine-containing polymer, a step of irradiating selectively a specified region in the photosensitive layer with an energy beam, a step of heat-treating the exposed photosensitive layer, and a step of developing the heat-treated photosensitive layer to selectively remove exposed portions or unexposed portions of the photosensitive layer. The photoresist layer shows good transparency to low wavelength light such as F2 excimer laser, good resolving power, and sensitivity, and hence useful for very fine pattern formation.

IT 460751-58-0P

(synthesis of fluoropolymers for photoacid generator type photoresists)

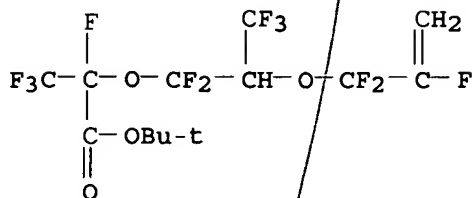
RN 460751-58-0 HCAPLUS

CN Propanoic acid, 2,3,3,3-tetrafluoro-2-[1,1,3,3,3-pentafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 460751-57-9

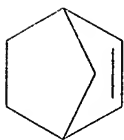
CMF C13 H12 F12 O4



CM 2

CRN 498-66-8

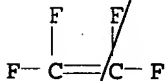
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



IC ICM G03F007-039

ICS H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

IT 133938-75-7P, 2-Norbornene-tetrafluoroethylene copolymer

262617-10-7DP, hydrolyzed 262617-10-7P 365568-40-7P

365568-41-8P 460751-56-8P 460751-58-0P 460751-60-4P

(synthesis of fluoropolymers for photoacid generator type photoresists)

REFERENCE COUNT: 9

THERE ARE 9 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L18 ANSWER 60 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:392162 HCAPLUS

DOCUMENT NUMBER: 136:409022

TITLE: Positive resist composition

INVENTOR(S): Aoai, Toshiaki; Yasunami, Shoichiro; Mizutani, Kazuyoshi; Kanna, Shinichi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: U.S. Pat. Appl. Publ., 56 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002061464	A1	20020523	US 2001-961281	2001 0925
US 6852467	B2	20050208		
JP 2002333715	A2	20021122	JP 2001-202298	2001 0703
TW 528931	B	20030421	TW 2001-90123599	2001 0925
PRIORITY APPLN. INFO.:			JP 2000-292537	A 2000 0926
			JP 2000-379284	A 2000 1213
			JP 2001-62158	A 2001 0306
			JP 2001-202298	A 2001 0703

AB The present invention relates to a pos. resist composition comprising:  
 (A) a fluorine group-containing resin having at least one fluorine atom on at least one of the main chain and the side chain of the polymer skeleton; and having a group capable of decomposing under the action of an acid to increase the solubility in an alkali developer;  
 (B) a compound capable of generating an acid upon irradiation with one of actinic ray and radiation; and (C) a surfactant containing at least one of a silicon atom and a fluorine atom. The present invention provides a pos. photoresist composition suitable for use in the microlithog. process in the production of VLSI or high-capacity microchip, or in other photo-fabrication processes. The invention pos. photoresist composition is capable of forming a highly definite pattern using a vacuum UV ray of < 160 nm.

IT 430436-70-7P 430436-81-0P 430436-85-4P  
 430436-91-2P 430436-94-5P 430437-04-0P  
 (fluorine group-containing resin for pos. resist composition)

RN 430436-70-7 HCAPLUS

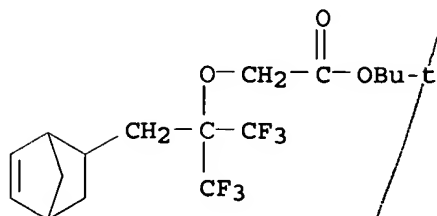
CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-ylethyl ester, polymer with 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-trifluoro-1-

(trifluoromethyl)ethoxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 430436-69-4

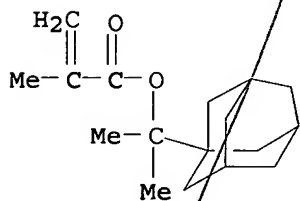
CMF C17 H22 F6 O3



CM 2

CRN 279218-76-7

CMF C17 H26 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



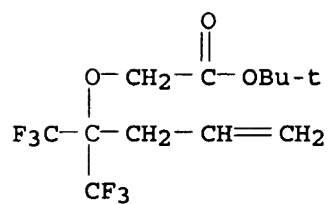
RN 430436-81-0 HCAPLUS

CN Acetic acid, [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]-, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 430436-80-9

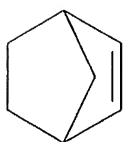
CMF C12 H16 F6 O3



CM 2

CRN 498-66-8

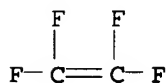
CMF C7 H10



CM 3

CRN 116-14-3

CMF C2 F4



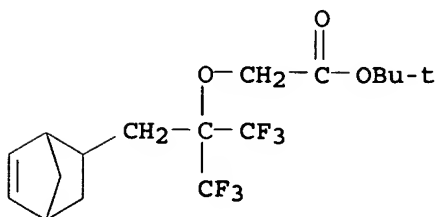
RN 430436-85-4 HCAPLUS

CM 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with  
 1,1-dimethylethyl [1-(bicyclo[2.2.1]hept-5-en-2-ylmethyl)-2,2,2-  
 trifluoro-1-(trifluoromethyl)ethoxy]acetate and  
 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

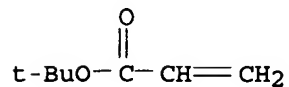
CRN 430436-69-4

CMF C17 H22 F6 O3



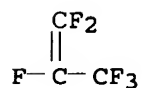
CM 2

CRN 1663-39-4  
CMF C7 H12 O2



CM 3

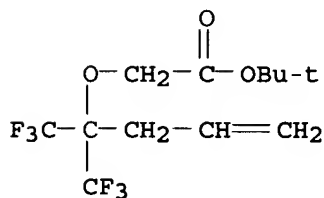
CRN 116-15-4  
CMF C3 F6



RN 430436-91-2 HCAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethylethyl ester, polymer with bicyclo[2.2.1]hept-2-ene, 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and tetrafluoroethene (9CI) (CA INDEX NAME)

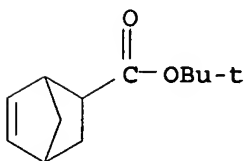
CM 1

CRN 430436-80-9  
CMF C12 H16 F6 O3



CM 2

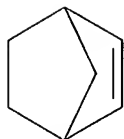
CRN 154970-45-3  
CMF C12 H18 O2



CM 3

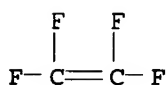


CRN 498-66-8  
CMF C7 H10



CM 4

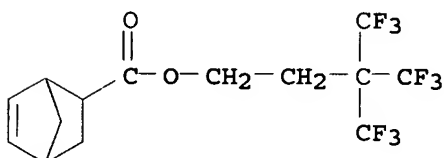
CRN 116-14-3  
CMF C2 F4



RN 430436-94-5 HCAPLUS  
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 4,4,4-trifluoro-3,3-bis(trifluoromethyl)butyl ester, polymer with 1,1-dimethylethyl [[1,1-bis(trifluoromethyl)-3-butenyl]oxy]acetate and 2,5-furandione (9CI) (CA INDEX NAME)

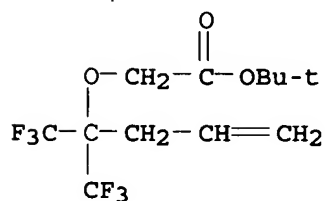
CM 1

CRN 430436-93-4  
CMF C14 H13 F9 O2



CM 2

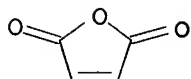
CRN 430436-80-9  
CMF C12 H16 F6 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



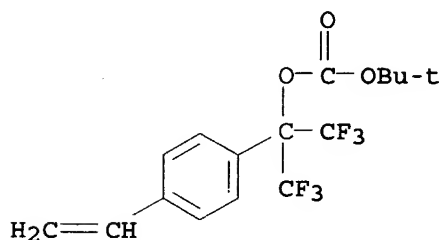
RN 430437-04-0 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with 2-methyl-2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 143336-93-0

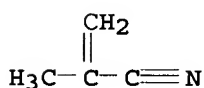
CMF C16 H16 F6 O3



CM 2

CRN 126-98-7

CMF C4 H5 N



IC ICM G03F007-004

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38, 76

IT	262617-13-0P	430436-66-1P	430436-67-2P	430436-68-3P
	<b>430436-70-7P</b>	430436-72-9P	430436-74-1P	430436-76-3P
	430436-78-5P	430436-79-6P	<b>430436-81-0P</b>	430436-82-1P
	430436-84-3P	<b>430436-85-4P</b>	430436-86-5P	430436-87-6P
	430436-89-8P	430436-90-1P	<b>430436-91-2P</b>	430436-92-3P
	<b>430436-94-5P</b>	430436-95-6P	430436-97-8P	430436-98-9P
	430436-99-0P	430437-01-7P	430437-03-9P	<b>430437-04-0P</b>
	430437-05-1P	430437-07-3P	430437-09-5P	430437-11-9P
	430437-12-0P	430437-13-1P	430437-14-2P	430437-15-3P

430437-17-5P 430437-18-6P 430437-19-7P 430437-21-1P  
 430437-22-2P 430437-24-4P 430437-26-6P 430437-27-7P  
 430437-29-9P 430437-30-2P 430437-32-4P 430437-33-5P  
 430437-34-6P 430437-35-7P 430437-36-8P 430437-37-9P  
 430437-38-0P 430437-39-1P 430437-40-4P 430437-42-6P  
 430437-44-8P 430437-46-0P 431062-12-3P 431062-14-5P  
 431062-16-7P 431062-17-8P 431062-18-9P 431062-20-3P  
 431062-22-5P 431062-24-7P 431062-25-8P

(fluorine group-containing resin for pos. resist  
 composition)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L18 ANSWER 61 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:148778 HCAPLUS

DOCUMENT NUMBER: 136:207683

TITLE: Transparent fluorine-containing polyesters,  
 their chemically amplified positive  
 photoresists, and high-resolution  
 photolithography using them

INVENTOR(S): Hatakeyama, Jun; Harada, Yuji; Watanabe,  
 Atsushi; Kawai, Yoshio; Sasako, Masaru; Endo,  
 Masataka; Kishimura, Shinji; Otani, Michitaka;  
 Miyazawa, Satoru; Tsutsumi, Kentaro; Maeda,  
 Kazuhiko

PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan;  
 Matsushita Electric Industrial Co., Ltd.;  
 Central Glass Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002060475	A2	20020226	JP 2000-248954	2000 0818

PRIORITY APPLN. INFO.: JP 2000-248954

2000  
0818

AB The polyesters have F-containing repeating units of  
 OCR4R5-p-C6H9R6-CR2R3OCOR1CO or OCR4R5-p-C6H3R6-CR2R3OCOR1CO [R1 =  
 (F-containing) divalent hydrocarbon group; R2-5 = H, F, (F-containing)  
 alkyl; R6 = F, (F-containing) alkyl, may form a ring]. The  
 photoresists are useful for excimer lasers.

IT 400837-39-0P 400837-40-3P 400837-41-4P  
 400837-42-5P 400837-43-6P, 2,2-Bis[4-  
 (chlorocarbonyl)phenyl]hexafluoropropane-1,4-cyclohexanedicarbonyl  
 chloride- $\alpha,\alpha,\alpha',\alpha'$ -tetramethyl-1,4-  
 cyclohexanedimethanol- $\alpha,\alpha,\alpha',\alpha'$ -  
 tetramethyl-1,4-benzenedimethanol copolymer 400837-44-7P  
 (transparent fluorine-containing polyesters for chemical amplified  
 pos. photoresists)

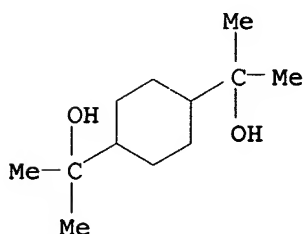
RN 400837-39-0 HCAPLUS

CN Hexanedioic acid, octafluoro-, dimethyl ester, polymer with  $\alpha, \alpha, \alpha', \alpha'$ -tetramethyl-1,4-cyclohexanedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 35541-82-3

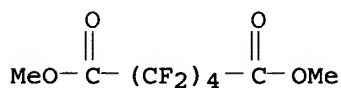
CMF C12 H24 O2



CM 2

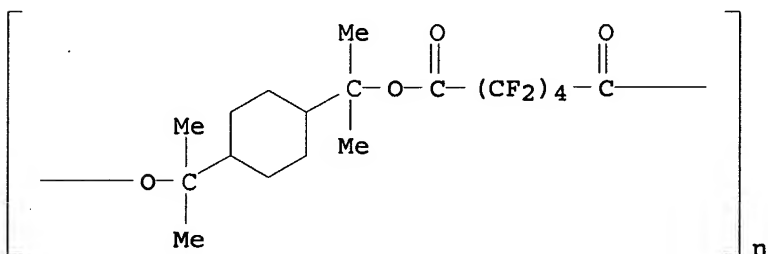
CRN 3107-98-0

CMF C8 H6 F8 O4



RN 400837-40-3 HCAPLUS

CN Poly[oxy(1-methylethylidene)-1,4-cyclohexanediyl(1-methylethylidene)oxy(2,2,3,3,4,4,5,5-octafluoro-1,6-dioxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)



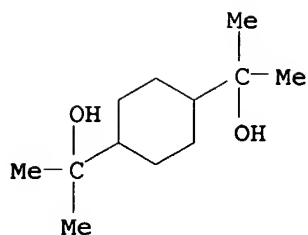
RN 400837-41-4 HCAPLUS

CN Benzoyl chloride, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with  $\alpha, \alpha, \alpha', \alpha'$ -tetramethyl-1,4-cyclohexanedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 35541-82-3

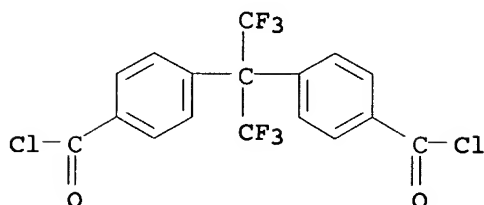
CMF C12 H24 O2



CM 2

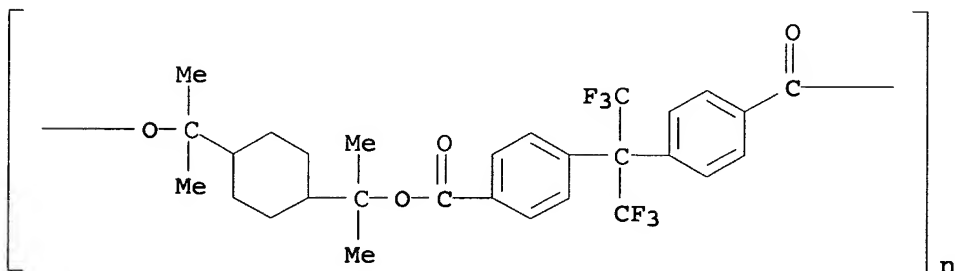
CRN 1102-92-7

CMF C17 H8 Cl2 F6 O2



RN 400837-42-5 HCAPLUS

CN Poly[oxy(1-methylethylidene)-1,4-cyclohexanediyl(1-methylethylidene)oxycarbonyl-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenylenecarbonyl] (9CI) (CA INDEX NAME)



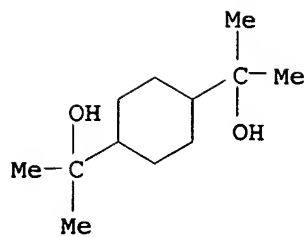
RN 400837-43-6 HCAPLUS

CN 1,4-Cyclohexanedicarbonyl dichloride, polymer with  $\alpha,\alpha,\alpha',\alpha'$ -tetramethyl-1,4-benzenedimethanol,  $\alpha,\alpha,\alpha',\alpha'$ -tetramethyl-1,4-cyclohexanedimethanol and 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[benzoyl chloride] (9CI) (CA INDEX NAME)

CM 1

CRN 35541-82-3

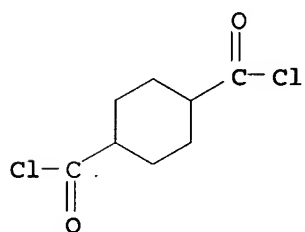
CMF C12 H24 O2



CM 2

CRN 13170-66-6

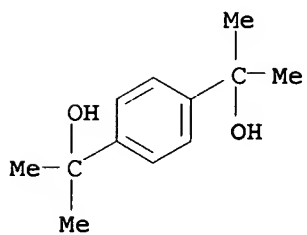
CMF C8 H10 Cl2 O2



CM 3

CRN 2948-46-1

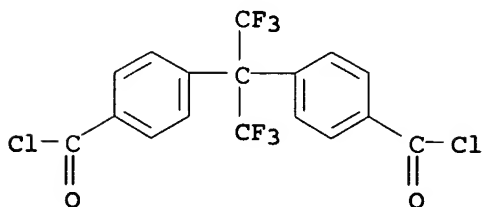
CMF C12 H18 O2



CM 4

CRN 1102-92-7

CMF C17 H8 Cl2 F6 O2

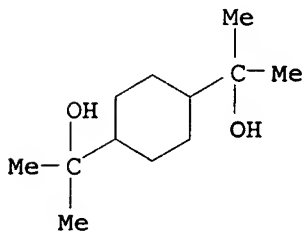


RN 400837-44-7 HCAPLUS  
 CN Hexanedioyl dichloride, polymer with  $\alpha,\alpha,\alpha'$ ,  $\alpha'$ -tetra-  
 ha.'-tetrakis(trifluoromethyl)cyclohexanedimethanol and  
 $\alpha,\alpha,\alpha',\alpha'$ -tetramethyl-1,4-  
 cyclohexanedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 35541-82-3

CMF C12 H24 O2

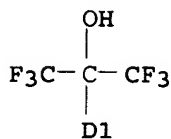
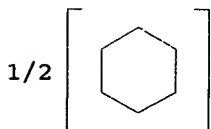


CM 2

CRN 29595-70-8

CMF C12 H12 F12 O2

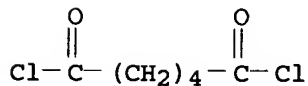
CCI IDS



CM 3

CRN 111-50-2

CMF C6 H8 Cl2 O2



IC ICM C08G063-682

ICS C08K005-00; C08L067-02; G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and

Other Reprographic Processes)

Section cross-reference(s): 38

IT 400837-39-0P 400837-40-3P 400837-41-4P  
400837-42-5P 400837-43-6P, 2,2-Bis[4-  
(chlorocarbonyl)phenyl]hexafluoropropane-1,4-cyclohexanedicarbonyl  
chloride- $\alpha,\alpha,\alpha',\alpha'$ -tetramethyl-1,4-  
cyclohexanedimethanol- $\alpha,\alpha,\alpha',\alpha'$ -  
tetramethyl-1,4-benzenedimethanol copolymer 400837-44-7P  
(transparent fluorine-containing polyesters for chemical amplified  
pos. photoresists)

L18 ANSWER 62 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:911549 HCAPLUS

DOCUMENT NUMBER: 136:286470

TITLE: Development of 157 nm positive resists

AUTHOR(S): Ito, H.; Wallraff, G. M.; Fender, N.; Brock,  
P. J.; Hinsberg, W. D.; Mahorowala, A.;  
Larson, C. E.; Truong, H. D.; Breyta, G.;  
Allen, R. D.

CORPORATE SOURCE: IBM Almaden Research Center, San Jose, CA,  
95120, USA

SOURCE: Journal of Vacuum Science & Technology, B:  
Microelectronics and Nanometer Structures  
(2001), 19(6), 2678-2684

CODEN: JVTBD9; ISSN: 0734-211X

PUBLISHER: American Institute of Physics

DOCUMENT TYPE: Journal

LANGUAGE: English

AB For adequate transparency hexafluoroisopropanol as an acid group  
and an  $\alpha$ -trifluoromethylacrylic moiety as a repeat unit have  
been selected as 157 nm resist polymers. The hexafluoroalc. group  
is bound to norbornene or styrene. Four platforms are currently  
available (1) all-acrylic, (2) all-alicyclic, (3)  
acrylic-alicyclic, and (4) acrylic-aromatic systems. While the  
all-alicyclic (all-norbornene) polymers are synthesized by  
transition-metal-initiated addition polymerization, all other polymers  
involving  $\alpha$ -trifluoromethylacrylic monomers are prepared by  
conventional radical copolymn. Characterization of the polymers  
and preliminary lithog. evaluation are reported.

IT 397302-12-4

(development of 157 nm pos. resists)

RN 397302-12-4 HCAPLUS

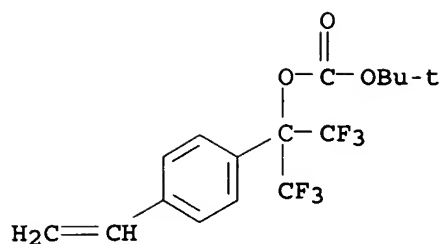
CN Carbonic acid, 1,1-dimethylethyl 1-(4-ethenylphenyl)-2,2,2-  
trifluoro-1-(trifluoromethyl)ethyl ester, homopolymer (9CI) (CA  
INDEX NAME)

CM 1

CRN 143336-93-0

CMF C16 H16 F6 O3





CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37, 38

IT 585-07-9 9011-14-7, Polymethylmethacrylate 25189-00-8  
 28825-23-2 59269-51-1, Polyhydroxystyrene 87261-04-9  
 88403-53-6 159296-87-4 199007-59-5 357397-07-0 370866-39-0  
 370866-48-1 390746-59-5 **397302-12-4** 406498-97-3

(development of 157 nm **pos. resists**)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L18 ANSWER 63 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:636379 HCAPLUS

DOCUMENT NUMBER: 135:218727

TITLE: Resist materials for 157-nm lithography

INVENTOR(S): Fedynyshyn, Theodore H.

PATENT ASSIGNEE(S): Massachusetts Institute of Technology, Inc.,  
 USA

SOURCE: PCT Int. Appl., 43 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001063362	A2	20010830	WO 2001-US5907	2001 0226
WO 2001063362	A3	20020307		
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 6468712	B1	20021022	US 2000-513792	2000 0225
EP 1257880	A2	20021120	EP 2001-911149	2001 0226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2003524211	T2	20030812	JP 2001-562262	2001 0226
US 2003157431	A1	20030821	US 2002-271807	

US 6815145 B2 20041109 2002  
 PRIORITY APPLN. INFO.: 1016  
 US 2000-513792 A 2000  
 0225  
 WO 2001-US5907 W 2001  
 0226

AB The invention relates to photoresist materials useful in microlithog. and to improved materials and methods for pattern formation on semiconductor wafers. A radiation sensitive resin composition including a photo-acid generator and an aliphatic polymer having  $\geq 1$  electron withdrawing groups adjacent to or attached to a C atom bearing a protected hydroxyl group, wherein the protecting group is labile in the presence of in situ generated acid is described. The radiation sensitive resin composition can be used as a resist suitable for image transfer by plasma etching and enable 1 to obtain an etching image having high precision with high reproducibility with a high degree of resolution and selectivity.

IT 357397-03-6  
 (pos. photoresist composition for 157-nm lithog. using)

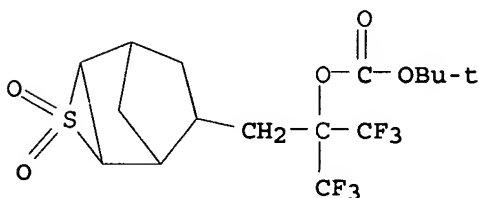
RN 357397-03-6 HCAPLUS

CN Carbonic acid, 1,1-dimethylethyl 1-[(3,3-dioxido-3-thiatricyclo[3.2.1.0<sup>2,4</sup>]oct-6-yl)methyl]-2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 357397-02-5

CMF C16 H20 F6 O5 S



IC ICM G03F007-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 25211-99-8D, functional-group protected 25568-84-7D, Cyclopentadiene homopolymer, reaction products with hexafluoroacetone, functional-group protected 219552-58-6D, functional-group protected 357397-03-6 357397-04-7D, functional-group protected 357397-05-8D, functional-group protected 357397-06-9D, functional-group protected 357397-07-0D, functional-group protected 357397-08-1D, functional-group protected 357397-09-2D, functional-group protected 357397-11-6D, functional-group protected 357397-12-7D, functional-group protected  
 (pos. photoresist composition for 157-nm lithog.)

using)

L18 ANSWER 64 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1999:472056 HCAPLUS  
 DOCUMENT NUMBER: 131:151716  
 TITLE: Heat-resistant positive photosensitive polymer  
 precursor compositions  
 INVENTOR(S): Tomikawa, Masao; Yoshida, Tomoyuki; Miura,  
 Yasuo  
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11202489	A2	19990730	JP 1998-4120	1998 0112

PRIORITY APPLN. INFO.:

JP 1998-4120

1998  
0112

AB The compns. contain (A) polymers [COR1CONHR2(OR3)pNH]<sub>n</sub> (R1 = C2-30 divalent organic group; R2 = C6-40 organic group; R3 = monovalent organic group giving OH in the presence of acid, C2-20 alkoxy carbonyl; n = 10-100,000; p = 1-4), [COR4(CO2R6)qCONHR5(OR7)rNH]<sub>m</sub> (R4 = C2-30 organic group; R5 = C6-40 organic group; R6 = H, C1-20 monovalent organic group; R7 = monovalent organic group giving OH in the presence of acid, C2-20 alkoxy carbonyl; m = 10-100,000; q = 1, 2; r = 1-3), or [COR9(OR8)s(CO2R11)tCONHR10NH]<sub>a</sub> (R8 = monovalent organic group giving OH in the presence of acid, C2-20 alkoxy carbonyl; R9 = C≥6 organic group; R10 = C≥2 divalent group; R11 = H, C1-20 organic group; a = 10-100,000; s = 1-4; t = 1, 2) and (B) compds. giving Lewis acids by irradiation of UV light and/or radiation. The compns. show high sensitivity and good develop ability by alkali aqueous solns.

IT 236119-67-8P, 2,2-Bis[3-amino-4-(tert-butoxycarbonyloxy)phenyl]hexafluoropropane-bis(4-aminophenoxyphenyl) sulfone-1,3-bis(3-aminopropyl)tetramethyldisiloxane-3,3',4,4'-diphenyl ether tetracarboxylic dianhydride-trimellitic anhydride chloride block copolymer

(heat-resistant pos. photosensitive polymer  
 precursor compns. with high sensitivity)

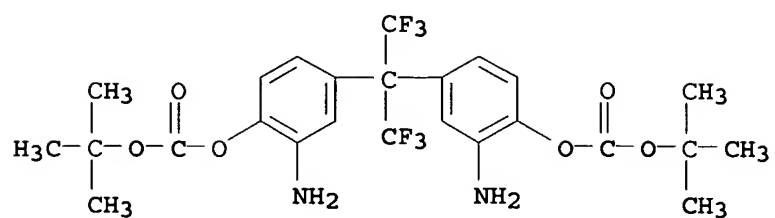
RN 236119-67-8 HCAPLUS

CN Carbonic acid, [2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis(2-amino-4,1-phenylene) bis(1,1-dimethylethyl) ester, polymer with 1,3-dihydro-1,3-dioxo-5-isobenzofurancarbonyl chloride, 5,5'-oxybis[1,3-isobenzofurandione], ar,ar'-[sulfonylbis(4,1-phenyleneoxy)]bis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine], block (9CI) (CA INDEX NAME)

CM 1

CRN 129708-71-0

CMF C25 H28 F6 N2 O6

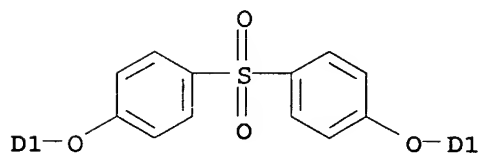
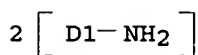
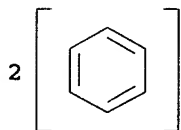


CM 2

CRN 89437-44-5

CMF C24 H20 N2 O4 S

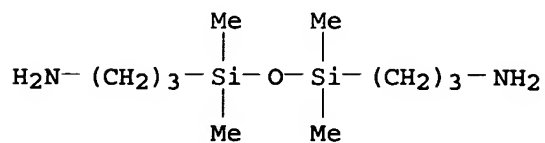
CCI IDS



CM 3

CRN 2469-55-8

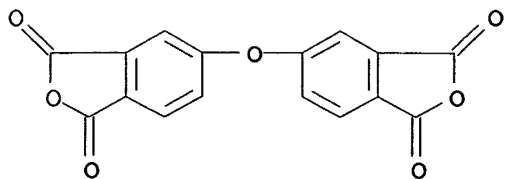
CMF C10 H28 N2 O Si2



CM 4

CRN 1823-59-2

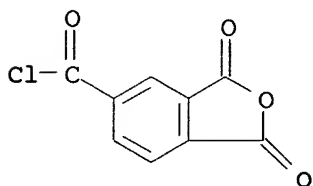
CMF C16 H6 O7



CM 5

CRN 1204-28-0

CMF C9 H3 Cl O4



IC ICM G03F007-039

ICS C08L079-08; C09D179-08; G03F007-004; G03F007-075

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

IT 236119-65-6P, 3,3',4,4'-Benzophenonetetracarboxylic dianhydride-2,2-bis(3-amino-4-hydroxyphenyl)hexafluoropropane-pyromellitic anhydride copolymer tert-butyl carbonate  
 236119-66-7P, 2,2-Bis(3-amino-4-hydroxyphenyl)hexafluoropropane-isophthalic acid dichloride copolymer tert-butyl carbonate  
 236119-67-8P, 2,2-Bis[3-amino-4-(tert-butoxycarbonyloxy)phenyl]hexafluoropropane-bis(4-aminophenoxyphenyl) sulfone-1,3-bis(3-aminopropyl)tetramethyldisiloxane-3,3',4,4'-diphenyl ether tetracarboxylic dianhydride-trimellitic anhydride chloride block copolymer

(heat-resistant pos. photosensitive polymer  
 precursor compns. with high sensitivity)

L18 ANSWER 65 OF 65 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:296965 HCAPLUS

DOCUMENT NUMBER: 126:285346

TITLE: Resists containing polymer having sulfonyl groups as photoacid generator and patterning method

INVENTOR(S): Kihara, Naoko; Saito, Satoshi; Wakabayashi, Hiromitsu; Nakase, Makoto; Ooba, Masayuki

PATENT ASSIGNEE(S): Tokyo Shibaura Electric Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 31 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

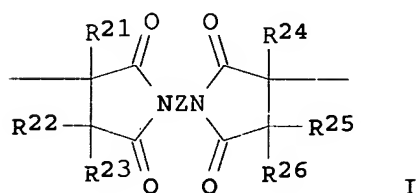
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

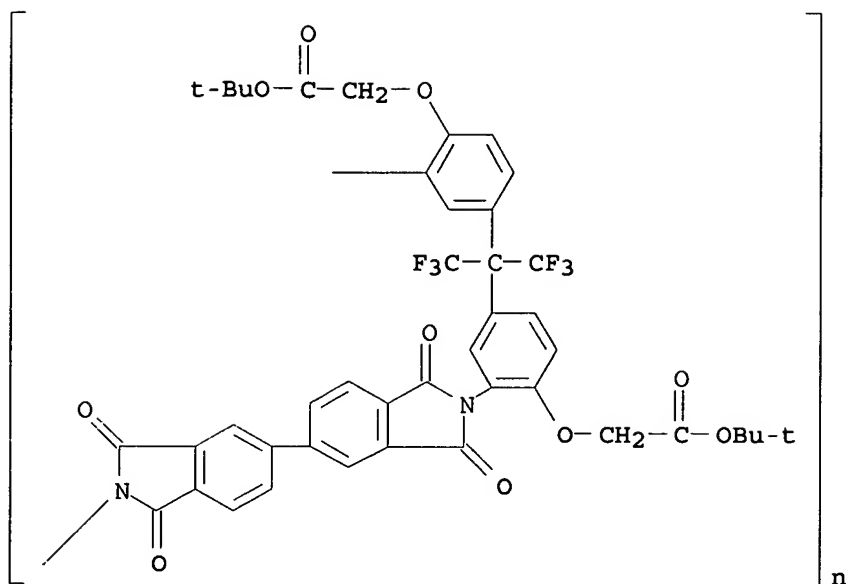
PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 09050127	A2	19970218	JP 1996-55027	1996 0312
JP 3382081	B2	20030304		
US 5756254	A	19980526	US 1996-654215	1996 0528
KR 191858	B1	19990615	KR 1996-19028	1996 0531
PRIORITY APPLN. INFO.:			JP 1995-134615	A 1995 0601
			JP 1996-55027	A 1996 0312

GI



- AB A resist containing [CR1(SO2R2)R3]<sub>n</sub> [R1 = H, halo, NO<sub>2</sub>, cyano, nitrile group, monovalent organic group; R2 = halo, NO<sub>2</sub>, cyano, nitrile group, monovalent organic group; R3 = divalent organic group, preferably I (R21-26 = H, halo, NO<sub>2</sub>, cyano, nitrile group, monovalent organic group; Z = divalent organic group); n ≥ 2] are claimed. The resist preferably contains a compound having substituent(s) which forms alkali-soluble group after being decomposed by acids to make the resist pos.-working. The resist provides a resist film with high rigidity resulting in giving a superfine pattern with high aspect ratio.
- IT 188778-62-3  
(alkali-soluble group-forming compound; resists containing polymers having sulfonyl groups as photoacid generators for improved rigidity)
- RN 188778-62-3 HCAPLUS
- CN Poly[(1,1',3,3'-tetrahydro-1,1',3,3'-tetraoxo[5,5'-bi-2H-isoindole]-2,2'-diyl) [6-[2-(1,1-dimethylethoxy)-2-oxoethoxy]-1,3-phenylene] [2,2,2-trifluoro-1-(trifluoromethyl)ethylidene] [4-[2-(1,1-dimethylethoxy)-2-oxoethoxy]-1,3-phenylene]] (9CI) (CA INDEX NAME)



IC ICM G03F007-039  
 ICS G03F007-004; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 IT 162102-77-4 188778-57-6 **188778-62-3** 188901-72-6  
 (alkali-soluble group-forming compound; resists containing polymers  
 having sulfonyl groups as **photoacid** generators for  
 improved rigidity)